



GRRSRTVFTELQLMGLEKRFQKYLSTPDRIDLAESLGLSQLQVKTWYQNRRMKWKKIV  
>Zebrafish|barx1|Barx|ANTP  
GRRSRTVFTELQLMGLEKRFQKYLSTPDRIDLAESLGLSQLQVKTWYQNRRMKWKKIV  
>Human|BARX2|Barx|ANTP  
PRRSRTIFTELQLMGLEKFFQKQKYLSTPDRDLAQSGLTQLQVKTWYQNRRMKWKKMV  
>Chicken|BARX2|Barx|ANTP  
PRRSRTIFTELQLMGLEKFFQKQKYLSTPDRDLAQSGLTQLQVKTWYQNRRMKWKKMV  
>Zebrafish|barx2|Barx|ANTP  
PRRSRTIFTELQLMGLEKFFQKQKYLSTPDRDLAQSGLTQLQVKTWYQNRRMKWKKMV  
>Zebrafish|bon|Mix|PRD  
RRKRTNFTQQQIDVLEKVYLDTKYPIYLREKLEALTGLPESRIQVWFQNRRAKSRRO  
>Zebrafish|brn1.2|Pou3|POU  
KRKKRTSIEVSVKGALESHFLKCPKPGASEINSLADSLQLEKEVVRVWFCNRRQKEKRM  
>Human|BSX|Bsx|ANTP  
RRKARTVFSDSQLSGLEKRFQRYLSTPERVELATALSLSSETQVKTWFQNRMMKHKKQL  
>Chicken|BSX|Bsx|ANTP  
RRKARTVFSDSQLSGLEKRFQRYLSTPERVELATALSLSSETQVKTWFQNRMMKHKKQL  
>Zebrafish|bsx|Bsx|ANTP  
RRKARTVFSDSQLSGLEKRFQRYLSTPERVELATALSLSSETQVKTWFQNRMMKHKKQL  
>Zebrafish|cart1|Alx|PRD  
KRRHRTTFTAQLEELEKVFQKTHYPDVVREQLAMRTELTEARVQVWFQNRRAKWRKRE  
>Human|CDX1|Cdx|ANTP  
KDKYRVVYTDHQRLQLELEKEFHYSRYITIRKSELAANLGLTERQVKIWFQNRRAKERKVN  
>Chicken|CDX1|Cdx|ANTP  
KDKYRVVYTDHQRLQLELEKEFHYSRYITIRKAEALAAALGLTERQVKIWFQNRRAKERKVN  
>Zebrafish|cdx1a|Cdx|ANTP  
KDKYRVVYSDVQRLELEKEFHYSRYITIRKAEAGTLNLSERQVKIWFQNRRAKERKMN  
>Zebrafish|cdx1b|Cdx|ANTP  
KDKYRVVYTDHQRLQLELEKEFHYSRYITIRKAEALATALSLSERQVKIWFQNRRAKERKIN  
>Human|CDX2|Cdx|ANTP  
KDKYRVVYTDHQRLQLELEKEFHYSRYITIRKAEALATLGLSERQVKIWFQNRRAKERKIN  
>Chicken|CDX2|Cdx|ANTP  
KDKYRVVYTDHQRLQLELEKEFHYSRYITIRKAEALASSLGLSERQVKIWFQNRRAKERKIN  
>Human|CDX4|Cdx|ANTP  
KEKYRVVYTDHQRLQLELEKEFHFNRYITIRKSELAVNLGLSERQVKIWFQNRRAKERKMI  
>Chicken|CDX4|Cdx|ANTP  
REKYRVVYTDHQRLQLELEKEFHFNRYITIRKSELAVNLGLSERQVKIWFQNRRAKERKL  
>Zebrafish|cdx4|Cdx|ANTP  
KEKYRVVYTDHQRLQLELEKEFHFNRYITIRKSELAVNLGLSERQVKIWFQNRRAKERKLI  
>Chicken|CDX4-2|Cdx|ANTP  
KEKYRVVYTDHQRLQLELEKEFHFNRYITIRKSELAVNLGLSERQVKIWFQNRRAKERKIN  
>Chicken|Cers-1|Cers|CERS  
QSPDGRLEGLSKQLDWDVVRKIQRWFRHRRNNDKP  
>Zebrafish|Cers-1|Cers|CERS  
RHRAEHNTVLEQHFTTKSKNPGQADIDGLCKKCGWSSRQVERWFRRRRNQDRP  
>Zebrafish|Cers-1|Cers|CERS  
IQANGPQKAQNAILEKVFTAITKHPDEKRLEGLSKQLDWDVVRTIQRWFRQRRNQEKPST  
>Human|CERS2|Cers|CERS  
NIKEKTRLRAPPNATLEHFYLTSGKQPKQVEVELLSRQSGLSGRQVERWFRRRRNQDRPSL  
>Human|CERS3|Cers|CERS  
GIKETVRKVTPNTVLENFFKHSTRQPLQTDIYGLAKKCNLTERQVERWFRSRRNQERPSR  
>Human|CERS4|Cers|CERS  
GVRDQTRRQVKPNATLEKHFLEHTEGHRPKEPQLSLLAAQCGLTLQQTQRWFRRRRNQDRPQL  
>Human|CERS5|Cers|CERS  
GIEDSGPYQAQNAILEKVFISITKYPDKRLEGLSKQLDWNVRKIQCWFRHRRNNDKPPT  
>Human|CERS6|Cers|CERS  
NIQANGPQIAPPNAILEKVFTAITKHPDEKRLEGLSKQLDWDVRSIQRWFRQRRNQEKPST

>Zebrafish|chr04.1|Alx|PRD  
RRIRTTFTVTQLQELERVFQDTHYPDVQTRDLLACRTQLTEARVQVWFQNRRAKWRR

>Zebrafish|chr05.1|Gsc|PRD  
RRHRTIFTEEQQALEDLFTHNQYPDIHTREQLALKTQLREERVEVWFKNRRAKWRRQK

>Chicken|chr10.1|Onecut|CUT  
KPRLVFTDVQRRTLHAIKFNKRPSKELQITISQQGLGELSTVSNFFMNARR

>Zebrafish|chr19\_01|unassigned|Other  
EQQMKILEKSFQKNSCPSYSEVESLQISSRSLREDVESWVFGRRRA

>Zebrafish|chr19\_02|unassigned|Other  
LISAFSRFPYPTPAELTGLTAASTHPEQQIRLWFSTQRLKQGI

>Chicken|chrUn.1|unassigned|Other  
RTKFSAVQLQELERSFREQRVIGASEKRRLLAAALDLSQSQIKTWQFNRRMKFKRE

>Chicken|chrZ.1|Onecut|CUT  
KSRLVFTDLQRRTLFAIFKFNKRPSKEMQITISQQGLGELTTVSNFFMNARRR

>Chicken|CNOT2|Noto|ANTP  
KRVRTIFTSDQLARLEKEFARQQYMGVTERCLLASALHLTEEQVKVWFQNRRIKWRRK

>Human|CPHX1|Cphx|Other  
KTKHRHKFSEELLQELKEIFGENCYPDYTRKTLAIKFDPCVNVNIDNWFQNKRARLPPE

>Human|CPHX2|Cphx|Other  
KTKHRHKFSEELLQELKEIFGENGYPDFTRKTLANKFDPCVNVINWFQNNRARLPPEE

>Human|CRX|Otx|PRD  
QRRERTTFTRSQLEELEALFAKTQYDPVYAREEVALKINLPESRVQVWFKNRRAKCRQQR

>Zebrafish|crx|Otx|PRD  
QRRERTTFTRTQLDILEALFTKTRYPDIFMREEVALKINLPESRVQVWFKNRRAKCRQQQ

>Human|CUX1|Cux|CUT  
LKKPRVVLAPEEKEALKRAYQQKPYPSPKTIEDLATQLNLKTSTVINWFHNYRSRIRREL

>Chicken|CUX1|Cux|CUT  
LKKPRVVLAPEEKEALKRAYQQKPYPSPKTIEELATQLNLKTSTVINWFHNYRSRIRREL

>Human|CUX2|Cux|CUT  
IKKPRVVLAPEEKEALRKAYQLEPYPSQQTIELLSFQLNLKTNTVINWFHNYRSRMRREM

>Chicken|CUX2|Cux|CUT  
IKKPRVVLAPEEKEALRKAYQLEPYPSQQTIELLSFQLNLKTNTVINWFHNYR

>Zebrafish|Cux2-l|Cux|CUT  
KKPRVVLAAEEKEALRKAYLQEPYPSQHTIEMLAALQLNLKTNTVINWFHNYRSRMRREV

>Human|DBX1|Dbx|ANTP  
GMLRRAVFSDVQRKALEKMFQKQKYISKPDRKKLAAKLGKDSQVKIWFQNRMMKWRNSK

>Chicken|DBX1|Dbx|ANTP  
GMLRRAVFSDVQRKALEKMFQKQKYISKPDRKKLAAKLGKDSQVKIWFQNRMMKWRNSK

>Zebrafish|dbx1a|Dbx|ANTP  
GMLRRAVFSDVQRKALEKMFQKQKYISKPDRKKLAAKLGKDSQVKIWFQNRMMKWRNSK

>Zebrafish|dbx1b|Dbx|ANTP  
GMLRRAVFSDVQRKALEKMFQKQKYISKPDRKKLATKLGKDSQVKIWFQNRMMKWRNSK

>Human|DBX2|Dbx|ANTP  
GILRRAVFSEDQRKALEKMFQKQKYISKTDKRLKLAINGLGLKESQVKIWFQNRMMKWRNSK

>Chicken|DBX2|Dbx|ANTP  
GILRRAVFSEDQRKALEKMFQKQKYISKTDKRLKLAINGLGLKESQVKIWFQNRMMKWRNSK

>Zebrafish|dbx2|Dbx|ANTP  
GILRRAVFSEEQRRELEKTFKQKYISKTERNRLASELSKETQVKIWFQNRMMKWRNSR

>Zebrafish|dharma|unassigned|Other  
RIRTVFTDNQTEQLERLFAVTDYPTVETRAELAQNGLSEETVRVWFKNRRARRKRQ

>Human|DLX1|Dlx|ANTP  
IRKPRTIYSSLQQLALNRRFQQTQYLALPERAELAASLGLTQTQVKIWFQNKRSKFKKLM

>Chicken|DLX1|Dlx|ANTP  
IRKPRTIYSSLQQLALNRRFQQTQYLALPERAELAASLGLTQTQVKIWFQNKRSKFKKLM

>Zebrafish|dlx1a|Dlx|ANTP  
IRKPRTIYSSLQQLALNRRFQQTQYLALPERAELAASLGLTQTQVKIWFQNKRSKFKKLM

>Human|DLX2|Dlx|ANTP

VRKPRTIYSSFQLAALQRRFQKTQYLALPERAELAASLGLTQTQVKIWFQNRRSKFKKMW  
>Zebrafish|dlx2a|Dlx|ANTP  
VRKPRTIYSTFQLAALQRRFQKTQYLALPERAELAASLGLTQTQVKIWFQNRRSKFKKLW  
>Zebrafish|dlx2b|Dlx|ANTP  
VRKPRTIYSSFQLAALQRRFQKTQYLALPERAELAASLGLTQTQVKIWFQNRRSKFKKLW  
>Human|DLX3|Dlx|ANTP  
VRKPRTIYSSYQLAALQRRFQKAQYLALPERAELAAQLGLTQTQVKIWFQNRRSKFKKLY  
>Chicken|Dlx3-l|Dlx|ANTP  
RKPRTIYSSYQLAALQRRFQKAQYLALPERAELAAQLGLTQTQV  
>Zebrafish|dlx3b|Dlx|ANTP  
IRKPRTIYSSYQLAALQRRFQKAQYLALPERAELAAQLGLTQTQVKIWFQNRRSKFKKLY  
>Human|DLX4|Dlx|ANTP  
LRKPRTIYSSLQLQHLNQRHQHTQYLALPERAQLAAQLGLTQTQVKIWFQNKRSKYKLL  
>Zebrafish|dlx4a|Dlx|ANTP  
IRKPRTIYSSLQLQALNQRHQHTQYLALPERADLAAKGLTQTQVKIWFQNKRSKYKKIM  
>Zebrafish|dlx4b|Dlx|ANTP  
IRKPRTIYSSVQLQALHQRHQHTQYLALPERADLAAKGLTQTQVKIWFQNKRSKYKKIM  
>Human|DLX5|Dlx|ANTP  
VRKPRTIYSSFQLAALQRRFQKTQYLALPERAELAASLGLTQTQVKIWFQNKRSKIKKIM  
>Chicken|DLX5|Dlx|ANTP  
VRKPRTIYSSFQLAALQRRFQKTQYLALPERAELAASLGLTQTQVKIWFQNKRSKIKKIM  
>Zebrafish|dlx5a|Dlx|ANTP  
VRKPRTIYSSFQLAALQRRFQNTQYLALPERAELAASLGLTQTQVKIWFQNKRSKIKKIM  
>Human|DLX6|Dlx|ANTP  
IRKPRTIYSSLQLQALNHRFQHTQYLALPERAELAASLGLTQTQVKIWFQNKRSKFKLL  
>Chicken|DLX6|Dlx|ANTP  
IRKPRTIYSSLQLQALNHRFQHTQYLALPERAELAASLGLTQTQVKIWFQNKRSKFKLL  
>Zebrafish|dlx6a|Dlx|ANTP  
IRKPRTIYSSLQLQALNHRFQHTQYLALPERAELAASLGLTQTQVKIWFQNKRSKFKLL  
>Human|DMBX1|Dmbx|PRD  
QRRSRTAFTAQQLALEKTFQKTHYPDVVMRERLAMCTNLPEARVQVWFKNRRRAKFRKKQ  
>Chicken|DMBX1|Dmbx|PRD  
QRRSRTAFTAQQLALEKTFQKTHYPDVVMRERLAMCTNLPEARVQVWFKNRRRAKFRKKQ  
>Zebrafish|Dmbx1-l|Dmbx|PRD  
QRRSRTAFVSQQLALEKAFQHTQYPDVGMRERLAVCINLPEARIQVWFKNRRRAKFRKGQ  
>Zebrafish|dmbx1a|Dmbx|PRD  
QRRSRTAFTAQQLALEKTFQKTHYPDVVMRERLAMCTNLPEARVQVWFKNRRRAKFRKKQ  
>Zebrafish|dmbx1b|Dmbx|PRD  
QRRSRTAFTAQQLALEKTFQKTHYPDVVMRERLAMCTNLPEARVQVWFKNRRRAKFRKKQ  
>Human|DPRX|Dprx|PRD  
SHRKRMTFTKKLEDLNLFNENPYPNPSLQKEMASKIDIHPTVLQVWFKNHRACLKAK  
>Human|DRGX|Drgx|PRD  
QRRNRTTFTLQQLALEAVFAQTHYPDVFTREELAMKINLTEARVQVWFKNRRRAKWRKTE  
>Chicken|DRGX|Drgx|PRD  
QRRNRTTFTLQQLALEAVFAQTHYPDVFTREELAMKINLTEARVQVWFKNRRRAKWRKTE  
>Zebrafish|drgx|Drgx|PRD  
QRRNRTTFTLQQLALEAVFAQTHYPDVFAREELAMKINLTEARVQVWFKNRRRAKWRKTE  
>Human|DUX4|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRRRARHPGQG  
>Human|Dux4l|HD1|Dux|PRD  
QQRIVLNSSQKDALQALFKQNSYPIPTREQLAKEIGSLESRIQIWFQNNQ  
>Human|Dux4l|HD2|Dux|PRD  
AITKPQTGVLLQAFQRNRFPGTAIKEELAKQTGIPESRI  
>Human|DUX4L10|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH

>Human|DUX4L10|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L11|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L11|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L12|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L12|HD2|Dux|PRD  
GRRKRTAVTGFQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L13|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L13|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L14|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L14|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L15|HD1|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L15|HD2|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L2|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L2|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L3|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L3|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L4|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L4|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L5|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L5|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L6|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L6|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L7|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L7|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L8|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L8|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUX4L9|HD1|Dux|PRD  
GRRRRLVWTPSQSEALRACFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|DUX4L9|HD2|Dux|PRD  
GRRKRTAVTGSQTALLLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRARRHPGQG  
>Human|DUXA|HD1|Dux|PRD  
HRRCRTKFTEEQKILINTFNQKPYPGYATKQKLALEINTEESRIQIWFQNRARRHGFQK  
>Human|DUXA|HD2|Dux|PRD

ARRCRTTYSASQLHTLIKAFMKNPYPGIDSREELAKEIGVPESRVQIWFQNRRSRLLLQR  
>Human|DUXB|HD1|Dux|PRD  
FWRNRIQYNQSQKDILQSWFQHPDPAAREQLAKEIGVPESNIQVWFKNYRVKQRKLD  
>Human|DUXB|HD2|Dux|PRD  
ARQKQTFITWTQKNRLVQAFERNPFDPDIATRKKLAEQTGLQESRIQMWFQKQRSLYLKKS  
>Human|EMX1|Emx|ANTP  
PKRIRTAFTSPQLRLERAFKFNHYVVGAEKQLAGSLSLSETQVKVWFQNRRTKYKRQK  
>Chicken|EMX1|Emx|ANTP  
PKRIRTAFTSPQLRLERAFKFNHYVVGAEKQLASSLSLSETQVKVWFQNRRTKYKRQK  
>Zebrafish|emx1|Emx|ANTP  
PKRIRTAFTSPQLRLERAFKFNHYVVGAEKQLANSLSLSETQVKVWFQNRRTKYKRQK  
>Human|EMX2|Emx|ANTP  
PKRIRTAFTSPQLRLLEHAFKFNHYVVGAEKQLAHSLSLTETQVKVWFQNRRTKFKRQK  
>Chicken|EMX2|Emx|ANTP  
PKRIRTAFTSPQLRLLEHAFKFNHYVVGAEKQLAHSLSLTETQVKVWFQNRRTKFKRQK  
>Zebrafish|emx2|Emx|ANTP  
PKRIRTAFTSPQLRLLEHAFKFNHYVVGAEKQLAHSLSLTETQVKVWFQNRRTKFKRQK  
>Zebrafish|emx3|Emx|ANTP  
PKRIRTAFTSPQLRLERAFKFNHYVVGAEKQLANGLCLTETQVKVWFQNRRTKHKRQK  
>Human|EN1|En|ANTP  
DKRPRTAFTAEQLQRLKAEFQANRYITEQRRQTLAQELSLNESQIKIWFQNKRAKIKKAT  
>Chicken|EN1|En|ANTP  
DKRPRTAFTAEQLQRLKAEFQANRYITEQRRQSLAQELSLNESQIKIWFQNKRAKIKKAT  
>Human|EN2|En|ANTP  
DKRPRTAFTAEQLQRLKAEFQTNRYLITEQRRQSLAQELSLNESQIKIWFQNKRAKIKKAT  
>Zebrafish|eng1a|En|ANTP  
DKRPRTAFTAEQLQRLKAEFQTSRYITEQRRQALARELGLNESQIKIWFQNKRAKIKKSS  
>Zebrafish|eng1b|En|ANTP  
RPRTAFTAEQLQRLKAEFQANRYITEQRRQSLAQELNLSNESQIKIWFQNKRAKIKKAS  
>Zebrafish|eng2a|En|ANTP  
DKRPRTAFTAEQLQRLKAEFQTNRYLITEQRRQSLAQELGLNESQIKIWFQNKRAKIKKAS  
>Zebrafish|eng2b|En|ANTP  
DKRPRTAFTAEQLQRLKNEFQNNRYLITEQRRQALAQELGLNESQIKIWFQNKRAKIKKAT  
>Human|ESX1|Esx|PRD  
KRRRRTAFTQFQLQELNFFDESQYDPDVARERLAARLNLTEDRVQVWFQNRRAKWKRNQ  
>Zebrafish|eve1|Evx|ANTP  
RRHRTAFTREQLTRLEQEYCKESYVSRPRRCELAAALNLPETTIVWFQNRMMKDKRQR  
>Human|EVX1|Evx|ANTP  
MRRYRTAFTREQIARLEKEFYRENYVSRPRRCELAAALNLPETTIVWFQNRMMKDKRQR  
>Chicken|EVX1|Evx|ANTP  
MRRYRTAFTREQIARLEKEFYRENYVSRPRRCELAAALNLPETTIVWFQNRMMKDKRQR  
>Zebrafish|evx1|Evx|ANTP  
MRRYRTAFTREQIARLEKEFYRENYVSRPRRCELAAALNLPETTIVWFQNRMMKDKRQR  
>Human|EVX2|Evx|ANTP  
VRRYRTAFTREQIARLEKEFYRENYVSRPRRCELAAALNLPETTIVWFQNRMMKDKRQR  
>Chicken|EVX2|Evx|ANTP  
VRRYRTAFTREQIARLEKEFYRENYVSRPRRCELAAALNLPETTIV  
>Zebrafish|evx2|Evx|ANTP  
VRRYRTAFTREQIGRLEKEFYRENYVSRPRRCELAAALNLPETTIVWFQNRMMKDKRQR  
>Zebrafish|flh|Noto|ANTP  
RMRTSFTNDQLSRLEKEFARQQYMGVGSERFLLASALQLTEAQVKVWFQNRRIKWRKQS  
>Human|GBX1|Gbx|ANTP  
SRRRRTAFTSEQLLELEKEFHCKYLSLTERSQIAHALKLSEVQVKIWFQNRRAKWKRIK  
>Chicken|GBX1|Gbx|ANTP  
SRRRRTAFTSEQLLELEKEFHCKYLSLTERSQIAHALKLSEVQVKIWFQNRRAKWKRIK  
>Zebrafish|gbx1|Gbx|ANTP  
SRRRRTAFTSEQLLELEKEFHCKYLSLTERSQIAHALKLSEVQVKIWFQNRRAKWKRIK

>Human|GBX2|Gbx|ANTP  
NRRRRTAFTSEQLLELEKEFHCKKYLSLTERSQIAHALKLEEVQKIWFQNRRRAKWKRVK  
>Chicken|GBX2|Gbx|ANTP  
NRRRRTAFTSEQLLELEKEFHCKKYLSLTERSQIAHALKLEEVQKIWFQNRRRAKWKRVK  
>Zebrafish|gbx2|Gbx|ANTP  
NRRRRTAFTSEQLLELEKEFHCKKYLSLTERSQIAHALKLEEVQKIWFQNRRRAKWKRVK  
>Chicken|gga\_chr02.1|Hox5|ANTP  
KRARTAYTRYQTLLELEKEFHFNRYLTRRRRIEIAHALCLSERQIKIWFQNRRMKWKKD  
>Chicken|gga\_chr03.1|Hlx|ANTP  
SRAVFSNLQRKGLEKRFEIQKYVTKPDRKQLAAMLGLTDAQV  
>Chicken|GNOT1|Noto|ANTP  
KRVRTVFKPEQLERLEQEFKQQYMGVTERVDLAATLRLTETQVKVWFQNRRRIKWRKQS  
>Human|GSC|Gsc|PRD  
KRRHRTIFTDEQLEALENLFQETKYPDVGTRERLARKVHLREEKVEVWFKNRRRAKWRKQK  
>Chicken|GSC|Gsc|PRD  
KRRHRTIFTDEQLEALENLFQETKYPDVGTRERLARKVHLREEKVEVWFKNRRRAKWRKQK  
>Zebrafish|gsc|Gsc|PRD  
KRRHRTIFTDEQLEALENLFQETKYPDVGTRERLARKVHLREEKVEVWFKNRRRAKWRKQK  
>Human|GSC2|Gsc|PRD  
TRRHRTIFSEEQLQALEALFVQNQYDPVSTRERLAGRIRLREERVEVWFKNRRRAKWRHQK  
>Chicken|GSC2|Gsc|PRD  
TRRHRTIFTEEQLQALETLFHQNQYDPVITREHLANRIHLKEERVEVWFKNRRRAKWRHQK  
>Human|GSX1|Gsx|ANTP  
SKRMRTAFTSTQLELELEREFASNMYLSRLRRIEATYLNLSEKQVKIWFQNRRVKHKKEG  
>Zebrafish|gsx1|Gsx|ANTP  
SKRMRTAFTSTQLELELEREFASNMYLSRLRRIEATYLNLSEKQVKIWFQNRRVKHKKEG  
>Human|GSX2|Gsx|ANTP  
GKRMRTAFTSTQLELELEREFSSNMYLSRLRRIEATYLNLSEKQVKIWFQNRRVKHKKEG  
>Zebrafish|gsx2|Gsx|ANTP  
GKRMRTAFTSTQLELELEREFSSNMYLSRLRRIEATYLNLSEKQVKIWFQNRRVKHKKEG  
>Human|HDX|Hdx|POU  
SRKRALQDRTQFSDRDLATLKKYWDNGMTSLGSVCREKIEAVATELNVDCEIVRTWIGNRRRKYRLMG  
>Chicken|HDX|HD1|Hdx|POU  
RSVFTVEQQRILQRYYENGMTNQSKNCFQLILQCAQETKLDVSVVRTWVGNKRRKM  
>Chicken|HDX|HD2|Hdx|POU  
SRKRALQDRTQFSDRDLATLKKYWDNGMTSLGSVCREKIEAVAAELNVDCEIVRTWIGNRRRKYRLMG  
>Human|HESX1|Hesx|PRD  
GRRPRTAFTQNQIEVLENVFRVNCYPGIDIREDLAQKLNLEEDRIQIWFQNRRRAKLRSH  
>Chicken|HESX1|Hesx|PRD  
GRRPRTAFTRNQIEVLENVFKMNSYPGIDIREELARKLDLEEDRIQIWFQNRRRAKLRSH  
>Zebrafish|hesx1|Hesx|PRD  
GRRPRTAFSSVQIKILESVFQVNSYPGIDIREELAKKLQLEEDRIQIWFQNRRRAKLRSH  
>Human|HHEX|Hhex|ANTP  
RKGGQVRFSDNDQTIELEKKFETQKYLSPPERKRLAKMLQLSERQVKTWFQNRRRAKWRRLK  
>Chicken|HHEX|Hhex|ANTP  
RKGGQVRFSDNEQTIELEKKFETQKYLSPPERKRLAKMLQLSERQVKTWFQNRRRAKWRRLK  
>Zebrafish|hhex|Hhex|ANTP  
RKGGQVRFSDNDQTIELEKKFETQKYLSPPERKRLAKMLQLSERQVKTWFQNRRRAKWRRLK  
>Human|HLX|Hlx|ANTP  
RSWSRAVFSNLQRKGLEKRFEIQKYVTKPDRKQLAAMLGLTDAQVKVWFQNRRMKWRHRSK  
>Zebrafish|hxl1|Hlx|ANTP  
RSWSRAVFSNLQRKGLEKRFEIQKYVTKPDRKQLAAMLGLTDAQVKVWFQNRRMKWRHRSK  
>Zebrafish|hxl1b|Hlx|ANTP  
CRRPRTAFTSQLELELENQFKLNKYLSPKRFEVATSLMLTETQVKIWFQNRRMKWKRSR  
>Zebrafish|hxl1b|Hlx|ANTP  
CRRPRTAFTSQLELELENQFKLNKYLSPKRFEVATSLMLTETQVKIWFQNRRMKWKRSR  
>Human|HMBOX1|Hmbox|HNF

RRGSRFTWRKECLAVMESYFNENQYPDEAKREEIANACNAVIQKPGKKLSDLERVTSLKVYNWFANRRKEIKRRA  
>Chicken|HMBOX1|Hmbox|HNF  
RRGSRFTWRKECLAVMESYFNENQYPDEAKREEIANACNAVIQKPGKKLSDLERVTSLKVYNWFANRRKEIKRRA  
>Zebrafish|hmbbox1a|Hmbox|HNF  
RRGSRFTWRKECLAVMESYFNENQYPDEAKREEIANACNAVIQKPGKKLSDLERVTSLKVYNWFANRRKEIKRRA  
>Zebrafish|hmbbox1b|Hmbox|HNF  
RRGSRFTWRKECLAVMESYFSDNQYPDEAKREEIANACNAVIQKPGKKLSDLERVTSLKVYNWFANRRKEIKRRA  
>Human|HMX1|Nk5/Hmx|ANTP  
KKKTRTVFSRSQVFQLESTFDLKRYSSTAERAGLAASLQLTETQVKIWFQNRNRNKWKRHV  
>Chicken|HMX1|Nk5/Hmx|ANTP  
KKKTRTVFSRSQVFQLESTFDVKRYLSSSERAGLAASLHLETETQVKIWFQNRNRNKWKRQL  
>Zebrafish|hmx1|Nk5/Hmx|ANTP  
KKKTRTVFSRSQVFQLESTFDMKRYLSSSERAGLAASLHLETETQVKIWFQNRNRNKWKRQL  
>Human|HMX2|Nk5/Hmx|ANTP  
KKKTRTVFSRSQVYQLESTFDMKRYLSSSERACCLASSLQLTETQVKTWFQNRNRNKWKRQL  
>Chicken|HMX2|Nk5/Hmx|ANTP  
KKKTRTVFSRSQVYQLESTFDMKRYLSSSERACCLASSLQLTETQVKTWFQNRNRNKWKRQL  
>Zebrafish|hmx2|Nk5/Hmx|ANTP  
KKKTRTVFSRSQVYQLESTFDMKRYLSSSERACCLASSLQLTETQVKTWFQNRNRNKWKRQL  
>Chicken|HMX2-like|Nk5/Hmx|ANTP  
KKKTRTVFSRSQVYQLESTFDMKRYLSSSERACCLASSLQLTETQVKTWFQNRNRNKWKRQL  
>Human|HMX3|Nk5/Hmx|ANTP  
KKKTRTVFSRSQVFQLESTFDMKRYLSSSERAGLAASLHLETETQVKIWFQNRNRNKWKRQL  
>Chicken|HMX3|Nk5/Hmx|ANTP  
KKKTRTVFSRSQVFQLESTFDMKRYLSSSERAGLAASLHLETETQVKIWFQNRNRNKWKRQL  
>Zebrafish|hmx3|Nk5/Hmx|ANTP  
KKKTRTVFSRSQVFQLESTFDMKRYLSSSERAGLAASLHLETETQVKIWFQNRNRNKWKRQL  
>Zebrafish|hmx4|Nk5/Hmx|ANTP  
KKKTRTIFSKRQIFQLESTFDMKRYLSSAERACLANSLQLTETQVKIWFQNRNRNKLRQL  
>Human|HNF1A|Hnf1|HNF  
GRRNRFKWGPASQQILFQAYERQKNPSKEERETLVEECNRAECIQRGVSPSQAQGLGNSLVTEVRVYNWFANRRKEEAFRH  
>Chicken|HNF1A|Hnf1|HNF  
GRRNRFKWGPASQQILFQAYERQKNPSKEEREALVEECNRAECIQRGVSPSQAQGLGNSLVTEVRVYNWFANRRKEEAFRH  
>Zebrafish|hnf1a|Hnf1|HNF  
GRRNRFKWGPASLQILFQAYERQKNPSKEEREGLVEECNRAECLQRGVSPSQLAGLGSNLVTEVRVYNWFANRRKEEAFRH  
>Human|HNF1B|Hnf1|HNF  
MRRNRFKWGPASQQILYQAYDRQKNPSKEEREALVEECNRAECLQRGVSPSKAHGLGNSLVTEVRVYNWFANRRKEEAFRQ  
>Chicken|HNF1B|HD1|Hnf1|HNF  
RRNRFKWGPASQQILYQAYDRQKNPSKEEREALVEECNR  
>Chicken|HNF1B|HD2|Hnf1|HNF  
HRAECLQRGVSPSKAHGLGNSLVTEVRVYNWFANRRKEEAFRQ  
>Zebrafish|hnf1ba|Hnf1|HNF  
LRRNRFKWGPASQQILYQAYERQKNPSKEEREALVEECNRAECLQRGVSPSKAHGLGNSLVTEVRVYNWFANRRKEEAFRQ  
>Zebrafish|hnf1bb|Hnf1|HNF  
MRRNRFKWGPASQEILYQAYERQKNPSKEEREALVEECNRAECVQRGVSPSKAHGLGNSLVTEVRVYNWFANRRKEEAFRQ  
>Human|HOMEZ|HD1|Zhx/Homez|ZF  
WTQAAQTSELDNEHLLKTFYFPYPSLADIALLCLRYGLQMEKVKTWFMAQRLRCGISW  
>Human|HOMEZ|HD2|Zhx/Homez|ZF  
RQRKTKRKTKEQLAILKSFLLQCQWARREDYQKLEQITGLPRPEIIQWFGDTRYALKHGQ  
>Human|HOMEZ|HD3|Zhx/Homez|ZF  
TPPLPIPPPPDIQPLERYWAAHQQLRETDIPQLSQASRLSTQQVLDWFDSRLPQPAEVV  
>Zebrafish|homez|HD1|Zhx/Homez|ZF  
WTQSDQTRELTSIPELVQAFNIFPYPTSQEVSTLARVCTLPLDKVKVWFMVQRIKYGISW  
>Zebrafish|homez|HD2|Zhx/Homez|ZF  
KKSQAQLTALRKSFLQENWPDETELQRLQDETSLTRNEIRKWFSDSRYLQRMGR  
>Zebrafish|homez|HD3|Zhx/Homez|ZF  
RKTKEQLTILKEYFQHCPWPKSGEYTEVVELTSLPRADVIQWFGDTRYAVKNG

>Zebrafish|homez|HD4|Zhx/Homez|ZF  
DVSPLELYFRQTGPLQEKDLNLCRKSMSYQQVRDWFASK

>Human|HOPX|Hopx|PRD  
SAETASGPTEDQVEILEYFNFNKVDKHPDSTTLCLIAAEAGLSEEETQKWFKQRLAKWRRSE

>Chicken|HOPX|Hopx|PRD  
ATEKSVPTTEEQLEILEYFNFKVKNKHPDPTTLCLIAAETGLSEEQTLKWFQRLAEWRKSE

>Chicken|Hox-10|Hox9-13(15)|ANTP  
RKKRCPYTKHQLELEKEFLFNMYLTRERRLEISKSINLTDQRQVKIWFQNRMMKLLKM

>Chicken|Hox-6|Hox6-8|ANTP  
ELEKEFHFNRYLTRRRRIEIAHSLCLTERQIKIWFQNRMMKWKKE

>Chicken|Hox-7|Hox6-8|ANTP  
RKRGRQTYTRYQTLELEKEFHYNRYLTRRRRIEIAHALCLTERQIKIWFQNRMMKWKKE

>Human|HOXA1|Hox1|ANTP  
PNAVRTNFTTKQLTELEKEFHFNKYLTRARRVEIAASLQLNETQVKIWFQNRMMKQKKRE

>Chicken|HOXA1|Hox1|ANTP  
VRTNFTTKQLTELEKEFHFNKYLTRARRVEIAASLQLNETQVKIWFQNRMMKQKKRE

>Human|HOXA10|Hox9-13(15)|ANTP  
GRKKRCPYTKHQLELEKEFLFNMYLTRERRLEISRSVHLTDQRQVKIWFQNRMMKLLKMN

>Chicken|HOXA10|Hox9-13(15)|ANTP  
GRKKRCPYTKHQLELEKEFLFNMYLTRERRLEISRTVHLTDQRQVKIWFQNRMMKLLKMN

>Zebrafish|hoxa10b|Hox9-13(15)|ANTP  
GRKKRCPYTKHQLELEKEFLFNMYLTRERRLEISRSVHLTDQRQVKIWFQNRMMKLLKMS

>Human|HOXA11|Hox9-13(15)|ANTP  
TRKKRCPYTKYQIRELEREFFSVYINKEKRLQLSRMLNLTDRQVKIWFQNRMMKEKKIN

>Chicken|HOXA11|Hox9-13(15)|ANTP  
TRKKRCPYTKYQIRELEREFFSVYINKEKRLQLSRMLNLTDRQVKIWFQNRMMKEKKIN

>Zebrafish|hoxa11a|Hox9-13(15)|ANTP  
RKKRCPYTKFQIRELEREFFSVYINKEKRLQLSRMLNLTDRQVKMWFQNRMMKEKKN

>Zebrafish|hoxa11b|Hox9-13(15)|ANTP  
TRKKRCPYTKYQIRELEREFFSVYINKEKRLQLSRMLNLTDRQVKIWFQNRMMKEKKN

>Human|HOXA13|Hox9-13(15)|ANTP  
GRKKRVPYTKVQLKELEREYATNKFITKDKRRRISATTNLSERQVTIWFQNRRVKEKKVI

>Zebrafish|hoxa13a|Hox9-13(15)|ANTP  
GRKKRVPYTKVQLKELEREYATNKFITKDKRRRISAQTNLSERQVTIWFQNRRVKEKKVV

>Zebrafish|hoxa13b|Hox9-13(15)|ANTP  
RKKRVPYTKVQLKELEREYATNKFITKDKRRRISAHTNLSERQVTIWFQNRRVKEKK

>Zebrafish|hoxa1a|Hox1|ANTP  
PNTVRTNFSTKQLTELEKEFHFNKYLTRARRVEIAASLQLNETQVKIWFQNRMMKQKKRE

>Human|HOXA2|Hox2|ANTP  
SRRLRTAYTNTQLELEKEFHFNKYLCRPRRVEIAALLDLTERQVKVWFQNRMMKHKRQT

>Zebrafish|hoxa2b|Hox2|ANTP  
TRRLRTAYTNTQLELEKEFHFNKYLCRPRRVEIAALLDLTERQVKVWFQNRMMKHKRQT

>Human|HOXA3|Hox3|ANTP  
SKRARTAYTSAQLVELEKEFHFNRYLCRPRRVEMANLLNLSERQIKIWFQNRMMKYKDDQ

>Chicken|HOXA3|Hox3|ANTP  
SKRARTAYTSAQLVELEKEFHFNRYLCRPRRVEMANLLNLSERQIKIWFQNRMMKYKDDQ

>Zebrafish|hoxa3a|Hox3|ANTP  
SKRARTAYTSAQLVELEKEFHFNRYLCRPRRVEMANLLNLSERQIKIWFQNRMMKYKDDQ

>Human|HOXA4|Hox4|ANTP  
PKRSRTAYTRQQVLELEKEFHFNRYLTRRRRIEIAHTLCLSERQVKIWFQNRMMKWKKDH

>Chicken|HOXA4|Hox4|ANTP  
PKRSRTAYTRQQVLELEKEFHFNRYLTRRRRIEIAHTLCLSERQVKIWFQNRMMKWKKDH

>Zebrafish|hoxa4a|Hox4|ANTP  
PKRSRTAYTRQQALELEKEFHFNRYLTRRRRVEIAHTMCLSERQVKIWFQNRMMKWKKDH

>Human|HOXA5|Hox5|ANTP  
GKRARTAYTRYQTLELEKEFHFNRYLTRRRRIEIAHALCLSERQIKIWFQNRMMKWKKDN

>Zebrafish|hoxa5a|Hox5|ANTP

GKRPRTAYTRYQTLELEKEFHFNRYLTRRRRIEIAHTLCLSERQIKIWFQNRRMKWKKDN  
>Human|HOXA6|Hox6-8|ANTP  
GRRGRQTYTRYQTLELEKEFHFNRYLTRRRRIEIANALCLTERQIKIWFQNRRMKWKKEN  
>Chicken|HOXA6|Hox6-8|ANTP  
LELEKEFHFNRYLTRRRRIEIANALCLTERQIKIWFQNRRMKWKKEN  
>Human|HOXA7|Hox6-8|ANTP  
RKRGRQTYTRYQTLELEKEFHFNRYLTRRRRIEIAHALCLTERQIKIWFQNRRMKWKKEH  
>Chicken|HOXA7|Hox6-8|ANTP  
RKRGRQTYTRYQTLELEKEFHFNRYLTRRRRIEIAHALCLTERQIKIWFQNRRMKW  
>Human|HOXA9|Hox9-13(15)|ANTP  
TRKKRCPYTKHQLELEKEFLFNMYLTRDRRYEVARLLNLTERQVKIWFQNRRMKMKKIN  
>Chicken|HOXA9|Hox9-13(15)|ANTP  
TRKKRCPYTKHQLELEKEFLFNMYLTRDRRYEVARLLNLTERQVKIWFQNRRMKMKKIN  
>Zebrafish|hoxa9a|Hox9-13(15)|ANTP  
TRKKRCPYTKHQILELEKEFLFNMYLTRDRRYEVARLLNLTERQVKIWFQNRRMKMKKFN  
>Zebrafish|hoxa9b|Hox9-13(15)|ANTP  
TRKKRCPYTKHQLELEKEFLFNMYLSRDRRYEVARLLNLTERQVKIWFQNRRMKMKKCN  
>Human|HOXB1|Hox1|ANTP  
PSGLRTNFTTRQLELEKEFHFNKYLSRARRVEIAATLELNETQVKIWFQNRRMKQKKRE  
>Chicken|HOXB1|Hox1|ANTP  
PNTIRTNFTTKQLTELEKEFHFNKYLTRARRVEIAATLELNETQVKIWFQNRRMKQKKRE  
>Zebrafish|hoxb10a|Hox9-13(15)|ANTP  
GRKKRCPYSKHQILELEKEFLFNMYLTRRRLEISRSINLDRQVKIWFQNRRMKLKKMT  
>Human|HOXB13|Hox9-13(15)|ANTP  
GRKKRIPYSGQLRELEREYAANKFITDKRRKISAATLSERQITIWQFNRRVKEKKVL  
>Chicken|HOXB13|Hox9-13(15)|ANTP  
GRKKRVPYSGQLKELEKEYASSKFITDKRRKISAATNLTERQITIWQFNRRVKEKKVV  
>Zebrafish|hoxb13a|Hox9-13(15)|ANTP  
GRKKRIPYTKVQLKELEKEYAANKFITDKRRKISAVTNLSERQITIWQFNRRVKEKKFI  
>Zebrafish|hoxb1a|Hox1|ANTP  
NTIRTNFTTKQLTELEKEFHFSKYLTRARRVEIAATLELNETQVKIWFQNRRMKQKKRE  
>Zebrafish|hoxb1b|Hox1|ANTP  
NIIRTNFTTKQLTELEKEFHFNKYLTRARRVEVAATLELNETQVKIWFQNRRMKQKKRE  
>Human|HOXB2|Hox2|ANTP  
ARRLRTAYTNTQLLELEKEFHFNKYLCRPRRVEIAALLDLTERQVKVWFQNRRMKHHRQT  
>Chicken|HOXB2|Hox2|ANTP  
SRRLRTAYTNTQLLELEKEFHFNKYLCRPRRVEIAALLDLTERQVKVWFQNRRMKHHRQT  
>Zebrafish|hoxb2a|Hox2|ANTP  
SRRLRTAYTNTQLLELEKEFHFNKYLCRPRRVEIAALLDLTERQVKVWFQNRRMKHHRQT  
>Human|HOXB3|Hox3|ANTP  
SKRARTAYTSAQLVELEKEFHFNRYLCRPRRVEMANLLNLSEQRQIKIWFQNRRMKYKKDQ  
>Chicken|HOXB3|Hox3|ANTP  
SKRARTAYTSAQLVELEKEFHFNRYLCRPRRVEMANLLNLSEQRQIKIWFQNRRMKYKKDQ  
>Zebrafish|hoxb3a|Hox3|ANTP  
SKRARTAYTSAQLVELEKEFHFNRYLCRPRRVEMANLLNLSEQRQIKIWFQNRRMKYKKDQ  
>Human|HOXB4|Hox4|ANTP  
PKRSRTAYTRQVLELEKEFHFNRYLTRRRRVEIAHALCLSERQIKIWFQNRRMKWKKDH  
>Zebrafish|hoxb4a|Hox4|ANTP  
PKRSRTAYTRQVLELEKEFHFNRYLTRRRRVEIAHTLCLSERQIKIWFQNRRMKWKKDH  
>Human|HOXB5|Hox5|ANTP  
GKRARTAYTRYQTLELEKEFHFNRYLTRRRRIEIAHALCLSERQIKIWFQNRRMKWKKDN  
>Chicken|HOXB5|Hox5|ANTP  
GKRARTAYTRYQTLELEKEFHFNRYLTRRRRIEIAHALCLSERQIKIWFQNRRMKWKKDN  
>Zebrafish|hoxb5a|Hox5|ANTP  
GKRARTAYTRYQTLELEKEFHFNRYLTRRRRIEIAHALCLSERQIKIWFQNRRMKWKKDN  
>Zebrafish|hoxb5b|Hox5|ANTP  
GKRARTAYTRYQTLELEKEFHFNRYLTRRRRIEIAHALCLSERQIKIWFQNRRMKWKKDN

>Human|HOXB6|Hox6-8|ANTP  
GRRGRQTYTRYQTLELEKEFHYNRYLTRRRRIEIAHALCLTERQIKIWFQNRMMKWKES  
>Zebrafish|hoxb6a|Hox6-8|ANTP  
GRRGRQTYTRYQTLELEKEFHFNRYLTRRRRIEIAHALCLTERQIKIWFQNRMMKWKEN  
>Zebrafish|hoxb6b|Hox6-8|ANTP  
GRRGRQTYTRFQTLELEKEFHFNRYLTRRRRIEISHALCLTERQIKIWFQNRMMKWKEN  
>Human|HOXB7|Hox6-8|ANTP  
RKRGRQTYTRYQTLELEKEFHYNRYLTRRRRIEIAHTLCLTERQIKIWFQNRMMKWKEN  
>Zebrafish|hoxb7a|Hox6-8|ANTP  
RKRGRQTSRYQTLELEKEFHFNRYLSRRRIEIAHALCLTERQIKIWFQNRMMKWKEN  
>Human|HOXB8|Hox6-8|ANTP  
RRRGRQTSRYQTLELEKEFLFNRYLTRRRRIEVSHALGLTERQVKIWFQNRMMKWKEN  
>Chicken|HOXB8|Hox6-8|ANTP  
RRRGRQTSRYQTLELEKEFLFNRYLTRRRRIEVSHALGLTERQVKIWFQNRMMKWKEN  
>Zebrafish|hoxb8a|Hox6-8|ANTP  
RRRGRQTSRYQTLELEKEFLFNRYLTRRRRIEVSHALGLTERQVKIWFQNRMMKWKEN  
>Zebrafish|hoxb8b|Hox6-8|ANTP  
RRRGRQTSRYQTLELEKEFLFNRYLTRRRRIEVSHALALTERQVKIWFQNRMMKWKKEH  
>Human|HOXB9|Hox9-13(15)|ANTP  
SRKKRCPYTKYQTLELEKEFLFNMYLTRDRRHEVARLLNLSERQVKIWFQNRMMKMKKMN  
>Chicken|HOXB9|Hox9-13(15)|ANTP  
SRKKRCPYTKYQTLELEKEFLFNMYLTRDRRHEVARLLNLSERQVKIWFQNRMMKMKKMN  
>Zebrafish|hoxb9a|Hox9-13(15)|ANTP  
SRKKRCPYTKYQTLELEKEFLFNMYLTRDRRHEVARLLNLSERQVKIWFQNRMMKMKKMN  
>Human|HOXC10|Hox9-13(15)|ANTP  
GRKKRCPYTKHQQTLELEKEFLFNMYLTRERRLEISKINLTDRQVKIWFQNRMMKMKKMN  
>Zebrafish|hoxc10a|Hox9-13(15)|ANTP  
RKKRCPYTKHQQTLELEKEFLFNMYLTRERRLEISKSINLTDRQVKIWFQNRMMKLLK  
>Human|HOXC11|Hox9-13(15)|ANTP  
TRKKRCPYSKFQIRELEREFFFNVIYINKEKRLQLSRMLNLTDRQVKIWFQNRMMKEKKLS  
>Chicken|Hoxc11|Hox9-13(15)|ANTP  
TRKKRCPYSKFQIRELEREFFFNVIYINKEKRLQLSRMLNLTDRQVKIWFQNRMMKEKK  
>Zebrafish|hoxc11a|Hox9-13(15)|ANTP  
TRKKRCPYSKFQIRELEREFFFNVIYINKEKRLQLSRMLNLTDRQVKIWFQNRMMKEKKLS  
>Zebrafish|Hoxc11b|Hox9-13(15)|ANTP  
RKKRCPYTKFQIRELEREFFFNVIYINKEKRLQLSRILNLTDRQVKIWFQNRMMKEKKLS  
>Human|HOXC12|Hox9-13(15)|ANTP  
SRKKRKPYSKLQLAELEGEFLVNEFITRQRRRELSDRNLNLSDDQVQVKIWFQNRMMKMKRLL  
>Zebrafish|hoxc12a|Hox9-13(15)|ANTP  
TRKKRKPYSKLQLAELEGEFMLNEFITRQRRRELSDRNLNLSDDQVQVKIWFQNRMMKMKRLL  
>Zebrafish|hoxc12b|Hox9-13(15)|ANTP  
TRKKRKPYSKLQLNELEGEFILNEFITRQRRRELSDRNLNLTDDQVQVKIWFQNRMMKMKRLL  
>Human|HOXC13|Hox9-13(15)|ANTP  
GRKKRVPYTKVQLKELEKEYAASKFITKEKRRRISATTNLSERQVTIWFQNRVKEKKV  
>Chicken|Hoxc13|Hox9-13(15)|ANTP  
RKKRVPYTKIQLKELEKEYAASKFITKEKRRRISATTNLSERQVTIWFQNRVKEKK  
>Zebrafish|hoxc13a|Hox9-13(15)|ANTP  
GRKKRVPYTKIQLKELEKEYAASKFITKDKRRRISATTNLSERQVTIWFQNRVKEKKFV  
>Zebrafish|hoxc13b|Hox9-13(15)|ANTP  
GRKKRVPYTKIQLKELEKEYAASKFITKDRRRRISATTSLSERQVTIWFQNRVKEKKFV  
>Zebrafish|hoxc1a|Hox1|ANTP  
SGGSRTNFTTKQLTELEKEFHFNRYLTRARRIEIANPLQLSETQVKIWFQNRMMKQKK  
>Zebrafish|hoxc3a|Hox3|ANTP  
SKRARVAFTSSQLELEKEFHFSAYLCRNRRLEMAELLKLTDRQIKIWFQNRMMKYKDD  
>Human|HOXC4|Hox4|ANTP  
PKRSRTAYTRQQVLELEKEFHFNRYLTRRRRIEIAHSLCLSERQIKIWFQNRMMKWKDDH  
>Chicken|Hoxc4|Hox4|ANTP

KRSRTAYTRQQVLELEKEFHYNRYLTRRRRVEIAHSLCLSERQIKIWFQNRRMKWKKD  
>Zebrafish|hoxc4a|Hox4|ANTP  
PKRSRTAYTRQQVLELEKEFHYNRYLTRRRRIEIAHSLVLSERQIKIWFQNRRMKWKKDH  
>Human|HOXC5|Hox5|ANTP  
GKRSRTSYTRYQTLELEKEFHFNRYLTRRRRIEIANNLCLNERQIKIWFQNRRMKWKKDS  
>Zebrafish|hoxc5a|Hox5|ANTP  
GKRSRTSYTRYQTLELEKEFHFNRYLTRRRRIEIANNLCLNERQIKIWFQNRRMKWKKDS  
>Human|HOXC6|Hox6-8|ANTP  
RRRGRQIYSRYQTLELEKEFHFNRYLTRRRRIEIANALCLTERQIKIWFQNRRMKWKKES  
>Zebrafish|hoxc6a|Hox6-8|ANTP  
RRRGRQIYSRYQTLELEKEFHFNRYLTRRRRIEIANALCLTERQIKIWFQNRRMKWKKET  
>Zebrafish|hoxc6b|Hox6-8|ANTP  
RRRGRQIYSRYQTLELEKEFHYNRYLTRRRRIEIANLCLSERQIKIWFQNRRMKWKKES  
>Human|HOXC8|Hox6-8|ANTP  
RRSGRQYTSRYQTLELEKEFLFNYPYLTRKRRIEVSHALGLTERQVKIWFQNRRMKWKKEN  
>Zebrafish|hoxc8a|Hox6-8|ANTP  
RRNGRQYTSRYQTLELEKEFLFNYPYLTRKRRIEVSHALSLTERQVKIWFQNRRMKWKKEN  
>Human|HOXC9|Hox9-13(15)|ANTP  
TRKKRCPYTKYQTLELEKEFLFNMYLTRDRRYEVARVLNLTDRQVKIWFQNRRMKMKKMN  
>Chicken|Hoxc9|Hox9-13(15)|ANTP  
TRKKRCPYTKYQTLELEKEFLFNMYLTRDRRYEVARVLNLTDRQVKIWFQNRMKMKKMM  
>Zebrafish|hoxc9a|Hox9-13(15)|ANTP  
TRKKRCPYTKYQTLELEKEFLFNMYLTRDRRYEVARVLNLTDRQVKIWFQNRRMKMKKMN  
>Human|HOXD1|Hox1|ANTP  
SSAIRTNFSTKQLTELEKEFHFNKYLTRARRIEIANCLHLNDTQVKIWFQNRRMKQKKRE  
>Chicken|HOXD1|Hox1|ANTP  
SLRTSFSTRQLTELEKEFHFSRYLSRARRLEVARSLRLRDAQVKVWFQNRRMKQKKRE  
>Human|HOXD10|Hox9-13(15)|ANTP  
GRKKRCPYTKHQQTLELEKEFLFNMYLTRRERLEISKSVNLTDQRQVKIWFQNRRMKLKKMS  
>Zebrafish|hoxd10a|Hox9-13(15)|ANTP  
GRKKRCPYTKHQQTLELEKEFLFNMYLTRRERLEISKSVNLTDQRQVKIWFQNRRMKLKKMS  
>Human|HOXD11|Hox9-13(15)|ANTP  
SRKKRCPYTKYQIRELEREFFFNVIYINKEKRLQLSRMLNLTDRQVKIWFQNRRMKKEKLN  
>Chicken|HOXD11|Hox9-13(15)|ANTP  
SRKKRCPYTKYQIRELEREFFFNVIYINKEKRLQLSRMLNLTDRQVKIWFQNRRMKKEKLN  
>Zebrafish|hoxd11a|Hox9-13(15)|ANTP  
SRKKRCPYTKYQIRELEREFFFNVIYINKEKRLQLSRMLSLTDRQVKIWFQNRRMKKEKLN  
>Human|HOXD12|Hox9-13(15)|ANTP  
ARKKRKPYTKQQAIELENEFLVNEFINRQKRKELSNRLNLSDDQVKIWFQNRRMKKKRVV  
>Chicken|HOXD12|Hox9-13(15)|ANTP  
SRKKRCPYTKQQAIELENEFLVNEFINRQKRKELSNRLNLSDDQVKIWFQNRRMKKKRVV  
>Zebrafish|hoxd12a|Hox9-13(15)|ANTP  
SRKKRCPYTKPQLTELENEFMNEFINRQKRKELSDRELSDDQVKIWFQNRRMKKKRLM  
>Human|HOXD13|Hox9-13(15)|ANTP  
GRKKRVPYTKLQLKELENEYAINKFINKDKRRRISAATNLSEQRVTIWFQNRRVKDKKIV  
>Chicken|HOXD13|Hox9-13(15)|ANTP  
GRKKRVPYTKLQLKELENEYAINKFINKDKRRRISAATNLSEQRVTIWFQNRRVKDKKIV  
>Zebrafish|hoxd13a|Hox9-13(15)|ANTP  
GRKKRVPYTKFQLKELENEYNTTKFITKENRRRIASSTNLSEQRVTIWFQNRRVKDKK  
>Human|HOXD3|Hox3|ANTP  
SKRVRTAYTSAQLVELEKEFHFNRYLCRPRRVEMANLLNLTDRQIKIWFQNRRMKYKDDQ  
>Chicken|HOXD3|Hox3|ANTP  
SKRVRTAYTSAQLVELEKEFHFNRYLCRPRRVEMANLLNLTDRQIKIWFQNRRMKYKDDQ  
>Zebrafish|hoxd3a|Hox3|ANTP  
SKRVRTAYTSAQLVELEKEFHFNRYLCRPRRVEMANLLNLTDRQIKIWFQNRRMKYKDDQ  
>Human|HOXD4|Hox4|ANTP  
PKRSRTAYTRQQVLELEKEFHFNRYLTRRRRIEIAHTLCLSERQIKIWFQNRRMKWKKDH

>Chicken|HOXD4|Hox4|ANTP  
PKRSRTAYTRQQVLELEKEFHFNRYLTRRRRIEIAHTLCLSERQIKIWFQNRRMKWKKDH

>Zebrafish|hoxd4a|Hox4|ANTP  
PKRSRTAYTRQQVLELEKEFHFNRYLTRRRRIEIAHTLCLSERQIKIWFQNRRMKWKKDH

>Human|HOXD8|Hox6-8|ANTP  
RRRGRQTYSRFQTLELEKEFLFNPYLTRKRRIEVSHALALTERQVKIWFQNRRMKWKKEN

>Chicken|HOXD8|Hox6-8|ANTP  
TYSRFQTLELEKEFLFNPYLTRKRRIEVSHALGLTERQVKIWFQNRRMKWKKEN

>Human|HOXD9|Hox9-13(15)|ANTP  
TRKKRCPYTKYQTLELEKEFLFNMYLTRDRRYEVARILNLTERQVKIWFQNRRMKMKKMS

>Zebrafish|hoxd9a|Hox9-13(15)|ANTP  
TRKKRCPYTKYQTLELEKEFLYNMYLTRDRRYEVARILNLTERQVKIWFQNRRMKMKKMN

>Human|IRX1|Irx|TALE  
DPGRPKNATRESTSTLKAWLNEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Zebrafish|irx1a|Irx|TALE  
DPARPKNATRESTSTLKAWLNEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Zebrafish|irx1b|Irx|TALE  
DPARAKSATRETTSTLKAWLQEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Human|IRX2|Irx|TALE  
DPAYRKNATRDATAATLKAWLNEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Chicken|IRX2|Irx|TALE  
DPAYRKNATRDATAATLKAWLQEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Zebrafish|irx2a|Irx|TALE  
DPAYRKNATRDATAATLKAWLQEHRKNPYPTKGQKIMLAITKMTLTQVSTWFANARRRLKKEN

>Human|IRX3|Irx|TALE  
DPSRPKNATRESTSTLKAWLNEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Zebrafish|irx3a|Irx|TALE  
DPSRPKNATRESTSTLKAWLSEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Zebrafish|irx3b|Irx|TALE  
DPSRPKNATRESTSTLKAWLSEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Human|IRX4|Irx|TALE  
SGTRRNATRETTSTLKAWLQEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Zebrafish|irx4a|Irx|TALE  
GTRRNATRETTSTLKAWLQEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Zebrafish|irx4b|Irx|TALE  
GTRRNATRETTSTLKAWLQEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Human|IRX5|Irx|TALE  
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>Chicken|IRX5|Irx|TALE  
SGTRRNATRETTSTLKTWLYEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Zebrafish|irx5a|Irx|TALE  
DPAYRKNATRDATAATLKAWLNEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Zebrafish|irx5b|Irx|TALE  
DPAYRKNATRDATAATLKAWLNEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Human|IRX6|Irx|TALE  
GAGRRKNATRETTSTLKAWLNEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Zebrafish|irx6a|Irx|TALE  
TRRNATRETTSTLKTWLYEHRKNPYPTKGEKIMLAITKMTLTQVSTWFANARRRLKKEN

>Zebrafish|irx7|Irx|TALE  
DPSRVTKVATRESTSALKAWLSEHLKNPYPTKGEKIMLAIVTKMSLTQVSTWFANARRRLKKEN

>Human|ISL1|Isl|LIM  
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>Chicken|ISL1|Isl|LIM  
TTRVRTVLNEKQLHLTLRTCYAANPRPDALMKEQLVEMTGLSPRVIRVWFQNKRCCKDKKRS

>Zebrafish|isl1|Isl|LIM  
TTRVRTVLNEKQLHLTLRTCYNANPRPDALMKEQLVEMTGLSPRVIRVWFQNKRCCKDKKRS

>Zebrafish|isl1|Isl|LIM

TRVRTVLSETQLCMLQTCYTANPRPDALMKEQLVEMTGLSPRVIRVWFQNKRCCKDKKRS  
>Human|ISL2|Isl|LIM  
TTRVRTVLNEKQLHLTLRTCYAANPRPDALMKEQLVEMTGLSPRVIRVWFQNKRCCKDKKKS  
>Zebrafish|isl2a|Isl|LIM  
TTRVRTVLNEKQLHLTLRTCYNANPRPDALMKEQLVEMTGLSPRVIRVWFQNKRCCKDKKKS  
>Zebrafish|isl2b|Isl|LIM  
TTRVRTVLNEKQLHLTLRTCYNANPRPDALMKEQLVEMTGLSPRVIRVWFQNKRCCKDKKRS  
>Human|ISX|Isx|PRD  
KRRVRTTFTTEQLHELEKIFHFTHYPDVHIRSQLAARINLPEARVQIWFQNRQAKWRKQE  
>Chicken|ISX|Isx|PRD  
KRRIRTTFTAELQLEKIFQVTHYPDVHIRNQLAAKINLPEARVQIWFQNRQAKWRKHE  
>Chicken|LASS2|Cers|CERS  
VKDKLRPKAQPISELETFTVNCKNPKEGELISLAKQCDLPVRKVERWFRRRRNTDRPSL  
>Zebrafish|lass2|unassigned|Other  
VKEKVRVRAAHNPMLEAYFRSTSKSPKQAEVESLVKKTGHTEREIHRWFRRRRNQERP  
>Chicken|LASS3|Cers|CERS  
GIKNVRRVKPQPNPVLESYFRECSRHPSQSEIQGLAKKCNCTVHLVEKWFRRRRNLEIPT  
>Chicken|LASS4|Cers|CERS  
VRDKRRPKAQPSATLEGFYKLLGRTPKEGDLISVAKQSGLPVRTVQTFWRHRRRAQDHPRL  
>Zebrafish|lass5|Cers|CERS  
IQTELSRRAQPNVLEKVFTSITKSPDSRHSEGLSKQLDWDVVRKVQRWFRHRRNQDKPST  
>Chicken|LASS6|Cers|CERS  
VQANGPQKAQPNVLEKVFTAITKHPDEKRLEGLSKQLDWDVRSIQRWFRQRRNQEKPST  
>Chicken|Lbx-1|Lbx|ANTP  
RRKSRTAFSNQQLFELERRFVRQKYLSPADRDQLAQRLALSSAQVITWFQNRRAKLR  
>Human|LBX1|Lbx|ANTP  
RRKSRTAFTNHQIYELEKRFQKYLSPADRDQIAQQLGLTNAQVITWFQNRRAKLRKREL  
>Zebrafish|lhx1a|Lbx|ANTP  
RRKSRTAFTNHQIYELEKRFQKYLSPADRDQIAHQLGLTNAQVITWFQNRRAKLRDL  
>Zebrafish|lhx1b|Lbx|ANTP  
RRKSRTAFTNHQIYELEKRFQKYLSPADRDQIAQQLGLTNAQVITWFQNRRAKLRDL  
>Human|LBX2|Lbx|ANTP  
RRKSRTAFTAQQVLELERRFVQKYLAPSERDGLATRLGLANAQVITWFQNRRAKLRDV  
>Zebrafish|lhx2|Lbx|ANTP  
RRKSRTAFTNHQIYELEKRFQKYLSPADRDQIAQQLGLTNAQVITWFQNRRAKLRDL  
>Human|LEUTX|Leutx|PRD  
YRRPRTRFLSKQLTALRELLEKTMHPSLATMGLKASKLQLDLSVVKIWFKNQRAKWKRQQ  
>Human|LHX1|Lhx1/5|LIM  
RRGPRTTIKAKQLETLKAAFAATPKPTRHIREQLAQETGLNMRVIQVWFQNRRAKLRKREL  
>Chicken|LHX1|Lhx1/5|LIM  
RRGPRTTIKAKQLETLKAAFAATPKPTRHIREQLAQETGLNMRVIQVWFQNRRAKLRKREL  
>Zebrafish|lhx1a|Lhx1/5|LIM  
RRGPRTTIKAKQLETLKAAFAATPKPTRHIREQLAQETGLNMRVIQVWFQNRRAKLRKREL  
>Zebrafish|lhx1b|Lhx1/5|LIM  
RRGPRTTIKAKQLETLKAAFAATPKPTRHIREQLAQETGLNMRVIQVWFQNRRAKLRKREL  
>Human|LHX2|Lhx2/9|LIM  
TKRMRTSFKHHQLRTMKSFYFAINHNPDADKDLKQLAQKTGLTKRVLQVWFQNRRAKLRKREL  
>Chicken|LHX2|Lhx2/9|LIM  
TKRMRTSFKHHQLRTMKSFYFAINHNPDADKDLKQLAQKTGLTKRVLQVWFQNRRAKLRKREL  
>Zebrafish|lhx2a|Lhx2/9|LIM  
SKRMRTSFKHHQLRTMQSFFTHHNHNPDADKDLKELAQKTGLTKRVLQVWFQNRRAKLRKREL  
>Zebrafish|lhx2b|Lhx2/9|LIM  
TKRMRTSFKHHQLRTMKSFYFAINHNPDADKDLKQLAQKTGLTKRVLQVWFQNRRAKLRKREL  
>Human|LHX3|Lhx3/4|LIM  
AKRPRTTITAKQLETLKSAFYNTSPKPARHVREQLSSETGLDMRVVQVWFQNRRAKLRKREL  
>Chicken|LHX3|Lhx3/4|LIM  
AKRPRTTITAKQLETLKNAYNNSPKPARHVREQLSSETGLDMRVVQVWFQNRRAKLRKREL

>Zebrafish | Ihx3 | Lhx3/4 | LIM  
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>Zebrafish | Lhx3/4-I | Lhx3/4 | LIM  
AKRPRTTITAKQLETLKSAYKNNSPKPARHVREQLSSETGLDMRVVQVWFQNRRAKEKRLK  
>Human | LHX4 | Lhx3/4 | LIM  
AKRPRTTITAKQLETLKNAYKNNSPKPARHVREQLSSETGLDMRVVQVWFQNRRAKEKRLK  
>Chicken | Lhx4-I | Lhx3/4 | LIM  
KRPRTTITAKQLETLKNAYKNNSPKPARHVREQLSSETGLDMRVVQVWFQNRRAKEKR  
>Human | LHX5 | Lhx1/5 | LIM  
RRGPRTTIKAKQLETLKAAFAATPKPTRHIREQLAQETGLNMRVIQVWFQNRRSKERRMK  
>Chicken | LHX5 | Lhx1/5 | LIM  
RRGPRTTIKAKQLETLKAAFAATPKPTRHIREQLAQETGLNMRVIQVWFQNRRSKERRMK  
>Zebrafish | Ihx5 | Lhx1/5 | LIM  
RRGPRTTIKAKQLETLKAAFAATPKPTRHIREQLAQETGLNMRVIQVWFQNRRSKERRMK  
>Human | LHX6 | Lhx6/8 | LIM  
AKRARTSFTAELQVMQAQFAQDNNPDAQTLQKLADMTGLSRRVIQVWFQNCRARHKKHT  
>Chicken | LHX6 | Lhx6/8 | LIM  
AKRARTSFTAELQVMQAQFAQDNNPDAQTLQKLADMTGLSRRVIQVWFQNCRARHKKHT  
>Zebrafish | Ihx6 | Lhx6/8 | LIM  
AKRARTSFTAELQVMQAQFAQDNNPDAQTLQKLADMTGLSRRVIQVWFQNCRARHKKHT  
>Zebrafish | Ihx6-I | Lhx6/8 | LIM  
SKRPRTSFTSEIQIMQTHFIRDKNPDAATLQRLADTTGLSRRVIQVWFQNCRARQKR  
>Zebrafish | Lhx6/8-I | Lhx6/8 | LIM  
SKRARTSFTADQLQVMQAQFVQDNNPDAQMLQSLAEQTGLSRRVIQVWFQNCRARHKKHV  
>Human | LHX8 | Lhx6/8 | LIM  
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>Chicken | LHX8 | Lhx6/8 | LIM  
AKRARTSFTADQLQVMQAQFAQDNNPDAQTLQKLAERTGLSRRVIQVWFQNCRARHKKHV  
>Zebrafish | Ihx8a | Lhx6/8 | LIM  
AKRARTSFTADQLQVMQAQFAQDNNPDAQTLQKLAERTGLSRRVIQVWFQNCRARHKKHV  
>Human | LHX9 | Lhx2/9 | LIM  
TKRMRTSFKHHQLRTMKSYFAINHNPDAKDLKQLAQKTGLTKRVLQVWFQNARAKFRRNL  
>Chicken | LHX9 | Lhx2/9 | LIM  
TKRMRTSFKHHQLRTMKSYFAINHNPDAKDLKQLAQKTGLTKRVLQVWFQNARAKFRRNL  
>Zebrafish | Ihx9 | Lhx2/9 | LIM  
TKRMRTSFKHHQLRTMKSYFAINHNPDAKDLKQLAQKTGLTKRVLQ  
>Chicken | Lmx-I | Lmx | LIM  
RETLAAETGLTVRVVQVWFQNRQAK  
>Zebrafish | Lmx-I | Lmx | LIM  
KRPRTILTQQRRAFKASFEVSSKPCRKVRETLAAETGLTVRVVQVWFQNRQAKMKKIA  
>Human | LMX1A | Lmx | LIM  
PKRPRTILTQQRRAFKASFEVSSKPCRKVRETLAAETGLSVRVVQVWFQNRQAKMKKLA  
>Human | LMX1B | Lmx | LIM  
PKRPRTILTQQRRAFKASFEVSSKPCRKVRETLAAETGLSVRVVQVWFQNRQAKMKKLA  
>Chicken | LMX1B | Lmx | LIM  
PKRPRTILTQQRRAFKASFEVSSKPCRKVRETLAAETGLSVRVVQVWFQNRQAKMKKLA  
>Zebrafish | lmx1b.1 | Lmx | LIM  
PKRPRTILTQQRRAFKASFEVSSKPCRKVRETLAAETGLSVRVVQVWFQNRQAKMKKLA  
>Zebrafish | lmx1b.2 | Lmx | LIM  
PKRPRTILTQQRRAFKASFEVSSKPCRKVRETLAAETGLSVRVVQVWFQNRQAKMKKLA  
>Zebrafish | LOC10000073 | Onecut | CUT  
KKSRLVFTDLQRRTLLAIFKENKRPSKEMQMTISQQLGLELSTVSNFFMNARRR  
>Zebrafish | LOC100001518 | Pou6 | POU  
KRKRRTSFTPQALEILNSHFEKNTHPSGQEMTEIAEKLNVDREVVRVWFQCNKRQALKNT  
>Zebrafish | LOC100008066 | Tlx | ANTP  
QICELEKRFHRQKYLASAERAALAKSLKMTDAQVKTWFQNRRTKWR  
>Zebrafish | LOC100330155 | unassigned | Other

GVKDPVRLKVTSPSPLEAFYTKNSRQPTQIEISGLVKQCGLTHRQVETWFRNRRNLDRPS  
>Zebrafish|LOC100330956|Mix|PRD  
RRKRTNFTQQQIDVLEKVYLDTKYVDIYLREKLEALTGLPESRIQVWFQNRRAKSRRO  
>Zebrafish|LOC100332856|unassigned|Other  
RRPRTAFSSEQISSLERVFKRNAYLGAQDKAELCRTLKLTDKQIRNWFQNRMMKLKRTV  
>Zebrafish|LOC100333298|Nk5/Hmx|ANTP  
KKKTRTVFSRAQVFQLESTFDLKYLSSEERAGLAASLHLETQVKIWFQNRNKKWRQI  
>Human|LOC100506764|HD1|Dux|PRD  
GRRRRLVWTPSQSEVLRAFERNPYPGIATRERLAQAIGIPEPRVQIWFQNERSRQLRQH  
>Human|LOC100506764|HD2|Dux|PRD  
GRRKRTAVTGSQTALLRAFEKDRFPGIAAREELARETGLPESRIQIWFQNRRARHPGQG  
>Chicken|LOC415513|Cers|CERS  
SEIQGLAKKCNCTVHLVEKWFRRRRNLEIPT  
>Chicken|LOC419032|Nobox|PRD  
KKTRTFYSAEQLEEKVQFQEDRYPDNEKRREIAAVIGVTPQRIMVWFQNRRAKWRKT  
>Chicken|LOC428131|Tgif|TALE  
SQICNWFNARRRL  
>Chicken|LOC428735|Pou4|POU  
KKRKRTSIAAPEKRSLEAYFALQPRPSEKIAAIAEKLDLKKNVVRVWFQNRQKQKRMK  
>Chicken|LOC429994|Gsx|ANTP  
GKRMRTAFTSTQLELELREFSSNMYLSRLRRIEATYLNLSKQVQIWFQNRVVKHKKEG  
>Zebrafish|LOC556453|HD1|Zfhx|ZF  
KRPRTRITDDQLKILRAHFDINNSPNEEQIQEMADKSGLPQKVIKHWFRNTLFKERQ  
>Zebrafish|LOC556453|HD2|Zfhx|ZF  
RTRFTDYQLRVLQDFDFTNAYPKDDEIEQLSTVLNLPTRVIVVWFQNRARQKARK  
>Zebrafish|LOC556453|HD3|Zfhx|ZF  
KRLRTTITPEQLEILYDKYLLDSNPTRKMLDHAHEVGLKKRVVQVWFQNRTRERERK  
>Zebrafish|LOC556453|HD4|Zfhx|ZF  
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>Zebrafish|LOC556898|Meox|ANTP  
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>Zebrafish|LOC558522|Tshz|ZF  
RKGRQSHWKPQHLLILQAQFTSCLRQTADGKYVISDLSSQERMVISHITGLSMTTISHWLANVKYQLRRTG  
>Zebrafish|LOC566969|Meox|ANTP  
PRKERTAFTKEQIRELESEFAHNNYLTRLRREYIAVNLDLTERQVKVWFQNRMMKWKRVK  
>Zebrafish|LOC571757|Satb|CUT  
KSRQPNRISMEALGILQSFQDVGLYPDEEAIHTLSAQLDLPKHTIIFQNRQFYINH  
>Human|LOC647589|LOC647589|Other  
KSRNFPREVREKLHNFVAVGVNTNPSKAERENLALETSLTPEQVYNWFANYRRRQRALPQH  
>Chicken|LOC769839|Mix|PRD  
RRKRTSFSKAQLELLVRTFEKQPYPGIALREQLSGLTDIPESRIQV  
>Chicken|LOC770725|HD1|Lmx|LIM  
PKRPRTILTQQRRAFKASFEVSSKPCRKQR  
>Chicken|LOC770725|HD2|Lmx|LIM  
PKRPRTILTQQRRAFKASFEVSSKPCRKVRETLAAETGLSVRVVQVWFQNRQAKMKKLA  
>Chicken|LOC771564|Otp|PRD  
QKRHRTRFTPAQLNELERRFAKTHYPDIFMREELALRIGLTERVQV  
>Chicken|LOC771682|Hox9-13(15)|ANTP  
GRKKRVYPYSGQLKELEKEYASSKFITRDKRRKISAATNLTERQITIWFQNRVKEKKVV  
>Zebrafish|LOC797948|HD1|Hdx|POU  
RSVFTAQQRILERYENGMTNQSCKFQLILQCAQETKLDVSVVVRTWVGNKRRKL  
>Zebrafish|LOC797948|HD2|Hdx|POU  
NSRKRTLQDRDQFSDRDLYTLKRYWDNGMTSLGSLCKEKIAAAAIQLNVDTEIITWIGNRRRKYRLMG  
>Human|MEIS1|Meis|TALE  
RHKKRGIFPKVATNIMRAWLQHLTHPYPSEEQKKQLAQDTGLTILQVNNWFNARRRIVQPM  
>Chicken|MEIS1|Meis|TALE  
RGIFPKVATNIMRAWLQHLTHPYPSEEQKKQLAQDTGLTILQVNNWFNARRTLFKPM

>Zebrafish | meis1 | Meis | TALE  
RNKKRGIFPKVATNIMRAWLFFQHLTHPYPSEEQKKQLAQDTGLTILQVNNWFINARRRIVQPM  
>Human | MEIS2 | Meis | TALE  
RQKKRGIFPKVATNIMRAWLFFQHLTHPYPSEEQKKQLAQDTGLTILQVNNWFINARRRIVQPM  
>Chicken | MEIS2 | Meis | TALE  
RQKKRGIFPKVATNIMRAWLFFQHLTHPYPSEEQKKQLAQDTGLTILQVNNWFINARRRIVQPM  
>Zebrafish | meis2.1 | Meis | TALE  
RQKKRGIFPKVATNIMRAWLFFQHLTHPYPSEEQKKQLAQDTGLTNLQVNNWFINARRRIVQPM  
>Zebrafish | meis2.2 | Meis | TALE  
RQKKRGIFPKVATNIMRAWLFFQHLTHPYPSEEQKKQLAQDTGLTILQVNNWFINARRRIVQPM  
>Human | MEIS3 | Meis | TALE  
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>Zebrafish | meis3 | Meis | TALE  
NKKRGIFPKVATNIMRAWLFFQHLSHPYPSEEQKKQLSQDTGLTILQVNNWFINARRRIVQPM  
>Zebrafish | meis4.1a | Meis | TALE  
NKKRGIFPKVATNIMRAWLFFQHLTHPYPSEEQKRQLSQDTGLTILQVNNWFINARRRIVQPM  
>Human | MEOX1 | Meox | ANTP  
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>Chicken | MEOX1 | Meox | ANTP  
RKERTAFTKEQLRELEAEFAHNNYLTRLRRYEIAVNLDLTERQVKVWFQNRMMKWKRVK  
>Zebrafish | meox1 | Meox | ANTP  
ARKERTAFTKEQLRELEAEFTHHNNYLTRLRRYEIAVNLDLTERQVKVWFQNRMMKWKRVK  
>Human | MEOX2 | Meox | ANTP  
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>Chicken | MEOX2 | Meox | ANTP  
PRKERTAFTKEQIRELEAEFAHNNYLTRLRRYEIAVNLDLTERQVKVWFQNRMMKWKRVK  
>Human | MIXL1 | Mix | PRD  
QRRKRTSFAEQQLLELVFRTRYDPDIHLRERLAALTLPELQVWFQNRRAKSRQS  
>Chicken | MIXL1 | Mix | PRD  
RRKRTSFTAQLELQVQDTMYPDIYLRERLADATQIPESRIQVWFQNRRAK  
>Human | MKX | Mx | TALE  
KVRHQRALQDMARPLKQWLYKHRDNPYPYPTKTEKILLALGSQMTLVQVSNWFANARRRLKNTV  
>Chicken | MKX | Mx | TALE  
KVRHQRALQDMARPLKQWLYKHRDNPYPYPTKTEKILLALGSQMTLVQVSNWFANARRRLKNTV  
>Zebrafish | mkxa | Mx | TALE  
KVRHQRALQDMARPLKQWLYKHRDNPYPYPTKTEKILLALGSQMTLVQVSNWFANARRRLKNTV  
>Chicken | MNR2 | Mnx | ANTP  
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>Human | MNX1 | Mnx | ANTP  
CRRPRTAFTSQQLLELEHQFKFNKYLSPKRFEVATSLMLTETQVKIWFQNRMMKWKRSK  
>Chicken | MNX1 | Mnx | ANTP  
CRRPRTAFTSQQLLELEHQFKLNKYLSPKRFEVATSLMLTETQVKIWFQNRMMKWKR  
>Zebrafish | mnx1 | Mnx | ANTP  
CRRPRTAFTSQQLLELEHQFKLNKYLSPKRFEVATSLMLTETQVKIWFQNRMMKWKRSK  
>Human | MSX1 | Msx | ANTP  
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>Chicken | MSX1 | Msx | ANTP  
NRKPRTPFQTAQQLLALERKFRQKQYLSIAERAEFSSSLTETQVKIWFQNRRAKAKRLQ  
>Human | MSX2 | Msx | ANTP  
NRKPRTPFQTSQQLLALERKFRQKQYLSIAERAEFSSSLNLTETQVKIWFQNRRAKAKRLQ  
>Chicken | MSX2 | Msx | ANTP  
NRKPRTPFQTSQQLLALERKFRQKQYLSIAERAEFSSSLNLTETQVKIWFQNRRAKAKRLQ  
>Zebrafish | msxa | Msx | ANTP  
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>Zebrafish | msxb | Msx | ANTP  
NRKPRTPFQTSQQLSLERKFRQKQYLSIAERAEFSSSLNLTETQVKIWFQNRRAKAKRLQ  
>Zebrafish | msxc | Msx | ANTP

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>Zebrafish|msxd|Msx|ANTP  
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>Zebrafish|msxe|Msx|ANTP  
NRKPRTPFSTTAQLLALERKFRQKQYLSIAERAEFSSSLTETQVKIWFQNRRAKAKRLQ  
>Zebrafish|mxtx1|unassigned|Other  
RRKRTSFSKEHVELLRATFETDPYPGISLRESLSQTTGLPESRIQVWFQNRARR  
>Zebrafish|mxtx2|unassigned|Other  
RRKRTSFTKEHLELLKMAFNVDPPYGISVRESLSQATGLPESRIQVWFQNKRRAR  
>Human|NANOG|Nanog|ANTP  
KQKTRTVFSSTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQRMKSKRWQ  
>Human|NANOGB|NANOGB|Other  
QYPEKRLVSKSLMHTLWAKFKLNRCPTIQESLSLSEFEDMTHKQISQWFCKTRKKYNKEM  
>Human|NKX1-1|Nk1|ANTP  
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>Chicken|NKX1-1|Nk1|ANTP  
PRRARTAFTYEQLVALENKFKSTRYLSVCERLNLALSLSLTETQVKIWFQNRRTKWKKQN  
>Human|NKX1-2|Nk1|ANTP  
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>Chicken|NKX1-2|Nk1|ANTP  
PRRARTAFTYEQLVALENKFRATRYLSVCERLNLALSLSLTETQVKIWFQNRRTKWKKQH  
>Zebrafish|nkx1.2a|Nk1|ANTP  
PRRARTAFTYEQLVALENKLRATRYLSVCERLNLALSLSLTETQVKIWFQNRRTKWKKQN  
>Zebrafish|nkx1.2b|Nk1|ANTP  
PRRARTAFTYEQLVALENKFKSTRYLSVCERLNLALSLSLTETQVKIWFQNRRTKWKKQN  
>Human|NKX2-1|Nk2.1|ANTP  
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>Chicken|NKX2-1|Nk2.1|ANTP  
RRKRRVLFSAQVYELERRFKQKQYLSAPEREHLASMIHLTPTQVKIWFQNHRYKMKRQA  
>Human|NKX2-2|Nk2.2|ANTP  
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>Human|NKX2-3|Nk4|ANTP  
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>Human|NKX2-4|Nk2.1|ANTP  
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>Human|NKX2-5|Nk4|ANTP  
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>Chicken|NKX2-5|Nk4|ANTP  
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>Human|NKX2-6|Nk4|ANTP  
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>Chicken|NKX2-6|Nk4|ANTP  
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>Human|NKX2-8|Nk2.2|ANTP  
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>Chicken|Nkx2-9|Nk2.2|ANTP  
RRKRRVLFSAQTYELERRFRQRYLSAPEREQLARLLRLTPTQVKIWFQNHRYKLRGR  
>Zebrafish|nkx2.1a|Nk2.1|ANTP  
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>Zebrafish|nkx2.1b|Nk2.1|ANTP  
RRKRRVLFSAQVYELERRFKQKQYLSAPEREHLASMIHLTPTQVKIWFQNHRYKMKRQA  
>Zebrafish|nkx2.1c|Nk2.1|ANTP  
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>Zebrafish|nkx2.2a|Nk2.2|ANTP  
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>Zebrafish|nkx2.2b|Nk2.2|ANTP  
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>Zebrafish|nkx2.3|Nk4|ANTP  
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>Zebrafish|nkx2.5|Nk4|ANTP  
RRKPRVLFSAQVYELERRFKQQRYSAPERDHLANVLKTSTQVKIWFQNRRYKCKRQR  
>Zebrafish|nkx2.7|Nk4|ANTP  
RRKPRVLFSAQVFELEERRFKQQRYSAPERDHLALALKTSTQVKIWFQNRRYKCKRQR  
>Zebrafish|nkx2.9|Nk2.2|ANTP  
RKKRRVLFSAQTYELERRFRQQRYSAPERELAHLLRLTPTQVKIWFQNHRYKMKRAR  
>Human|NKX3-1|Nk3|ANTP  
QKRSRAAFSHTQVIELERKFSHQKYSAPERHAHLAKNLKTETQVKIWFQNRRYKTKRKQ  
>Zebrafish|nkx3-1|Nk3|ANTP  
KKRSRAAFTHLQVLELEKFKSRQQRYSAPERTHLASALHKTETQVKIWFQNRRYKTKRRQ  
>Human|NKX3-2|Nk3|ANTP  
KKRSRAAFSHAQVFELEERRFNHQYRYSGLPERADLAASLKTETQVKIWFQNRRYKTKRRQ  
>Zebrafish|nkx3.2|Nk3|ANTP  
KKRSRAAFSHAQVFELEERRFNHQYRYSGLPERADLAASLKTETQVKIWFQNRRYKTKRRQ  
>Zebrafish|nkx3.3|Nk3|ANTP  
KKRSRAAFSHAQVYELARRFNLQYRYSGLPERADLAGALKLKTETQVKIWFQNRRYKTKRRQ  
>Human|NKX6-1|Nk6|ANTP  
RKHTRPTFSGQQIFALEKTFEQTKYLAGPERARLAYSGLMTESQVKVWFQNRRTKWRKKH  
>Human|NKX6-2|Nk6|ANTP  
KKHSRPTFSGQQIFALEKTFEQTKYLAGPERARLAYSGLMTESQVKVWFQNRRTKWRKRH  
>Chicken|NKX6-2|Nk6|ANTP  
KKHSRPTFSGQQIFALEKTFEQTKYLAGPERARLAYSGLMTESQVKVWFQNRRTKWRKRH  
>Human|NKX6-3|Nk6|ANTP  
KKHTRPTFTGHQIFALEKTFEQTKYLAGPERARLAYSGLMTESQVKVWFQNRRTKWRKKS  
>Chicken|NKX6-3|Nk6|ANTP  
KKHTRPTFTGHQIFALEKTFEQTKYLAGPERARLAYSGLMTESQVKVWFQNRRTKWRKKS  
>Zebrafish|nkx6.1|Nk6|ANTP  
RKHTRPTFSGQQIFALEKTFEQTKYLAGPERARLAYSGLMTESQVKVWFQNRRTKWRKRH  
>Zebrafish|nkx6.2|Nk6|ANTP  
KKHSRPTFSGQQIFALEKTFEQTKYLAGPERARLAYSGLMTESQVKVWFQNRRTKWRKRH  
>Zebrafish|nkx6.3|Nk6|ANTP  
KKHTRPTFSGHQIFALEKTFEQTKYLAGPERARLAYSGLMTESQVKVWFQNRRTKWRKKS  
>Human|NOBOX|Nobox|PRD  
RKKTRTLYRSDQLEELEKIFQEDHYPDSDKRREIAQTVGVTPQRIMVWFQNRRAKWRKME  
>Human|NOTO|Noto|ANTP  
QKRVRTMFNLEQLEELEKVFQKQHNLVGKKRAQLAARLKTENQVRVWFQNRRVKYQKQQ  
>Zebrafish|og9x|Mix|PRD  
RKRKRRTIFSRAQLSELERAFMITPYPDITLRRERLAALTLLPESKIQVWFQNRRAKWRKME  
>Zebrafish|Onecut-1|Onecut|CUT  
PKKQRLVFTDLQRRTLIAIFKENKRPSKEMQITISQQLGLELSTVSNFFMNARRRCVDRW  
>Human|ONECUT1|Onecut|CUT  
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>Zebrafish|oncut1|Onecut|CUT  
KKPRLVFTDVQRRTLHAIFKENKRPSKELQITISQQLGLELATVSNFFMNARRR  
>Human|ONECUT2|Onecut|CUT  
QKKSRLVFTDLQRRTLFAIFKENKRPSKEMQITISQQLGLELTTVSNFFMNARRRSLEKW  
>Human|ONECUT3|Onecut|CUT  
PKKQRLVFTDLQRRTLIAIFKENKRPSKEMQVTISQQLGLELNTVSNFFMNARRRCMNRW  
>Zebrafish|oncut3|Onecut|CUT  
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>Zebrafish|oncutl|Onecut|CUT  
PKRTRLVFTDLQRRTLMAIFRENHRPTKDLQITISQQLGLELSTVSNFFMNARRRNLNRW  
>Human|OTP|Otp|PRD  
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>Zebrafish|otpa|Otp|PRD

QKRHRTRFTPAQLNELERSFAKTHYPDIFMREELALRIGLTERVQVWFQNRRAKWKKRK  
>Zebrafish|otpb|Otp|PRD  
QKRHRTRFTPAQLNELERSFAKTHYPDIFMREELALRIGLTERVQVWFQNRRAKWKKRK  
>Human|OTX1|Otx|PRD  
QRRERTTFTRSQLDVLEALFAKTRYPDIFMREEVALKINLPESRVQVWFKNRRRAKCRQQQ  
>Zebrafish|otx1a|Otx|PRD  
QRRERTTFTRTQLDILESFAKTRYPDIFMREEVALKINLPESRVQVWFKNRRRAKCRQQQ  
>Zebrafish|otx1b|Otx|PRD  
QRRERTTFTRSQLDILEALFAKTRYPDIFMREEVALKINLPESRVQVWFKNRRRAKCRQQQ  
>Human|OTX2|Otx|PRD  
QRRERTTFTRAQLDVLEALFAKTRYPDIFMREEVALKINLPESRVQVWFKNRRRAKCRQQQ  
>Zebrafish|otx2|Otx|PRD  
QRRERTTFTRAQLDVLEALFAKTRYPDIFMREEVALKINLPESRVQVWFKNRRRAKCRQQQ  
>Zebrafish|otx5|Otx|PRD  
QRRERTTFTRAQLDVLEALFSKTRYPDIFMREEVALKINLPESRVQVWFKNRRRAKCRQQQ  
>Human|PAX2|Pax2/5/8|PRD  
KHLRADTFTQQLEALDRVFERPSYPDVFQASE  
>Zebrafish|pax2b|Pax2/5/8|PRD  
KHLRADAFTQQLEALDRVFERPAFPDVF  
>Human|PAX3|Pax3/7|PRD  
QRRSRTTFTAQLEELERAFERTHYPDIYTREELAQRACLTEARVQVWFSNRRARWRKQA  
>Chicken|PAX3|Pax3/7|PRD  
QRRSRTTFTAQLEELERAFERTHYPDIYTREELAQRACLTEARVQVWFSNRRARWRKQA  
>Zebrafish|pax3a|Pax3/7|PRD  
QRRSRTTFTAQLEELERAFERTHYPDIYTREELAQRACLTEARVQVWFSNRRARWRKQA  
>Zebrafish|pax3b|Pax3/7|PRD  
QRRSRTTFTADQLEELERAFERTHYPDIYTREELAQRACLTEARVQVWFSNRRARWRKQA  
>Human|PAX4|Pax4/6|PRD  
GHRNRTIFSPSQAEALEKEFQRGQYPDSVARGKLATATSLPEDTVRVWFSNRRRAKWRRQE  
>Zebrafish|pax4|Pax4/6|PRD  
HRSRTAFTADQSGRLEKEFTCGLYPDLLTREKLAETNLSQDTIKVWFSNRRARMRE  
>Human|PAX5|Pax2/5/8|PRD  
KQMRGDLFTQQLEVLDRVFERQHYSDFITTE  
>Human|PAX6|Pax4/6|PRD  
LQRNRTSFTQEQIEALEKEFERHYPDVFARERLAAKIDLPEARIQVWFSNRRRAKWRREE  
>Chicken|PAX6|Pax4/6|PRD  
LQRNRTSFTQEQIEALEKEFERHYPDVFARERLAAKIDLPEARIQVWFSNRRRAKWRREE  
>Zebrafish|Pax6-l|Pax4/6|PRD  
LQRNRTSFTQEQIDALEKEFERHYPDVFARERLAAKIDLPEARIQVWFSNRRRAKWRREE  
>Zebrafish|pax6a|Pax4/6|PRD  
LQRNRTSFTQEQIEALEKEFERHYPDVFARERLAAKIDLPEARIQVWFSNRRRAKWRREE  
>Zebrafish|pax6b|Pax4/6|PRD  
LQRNRTSFTQEQIEALEKEFERHYPDVFARERLAAKIDLPEARIQVWFSNRRRAKWRREE  
>Human|PAX7|Pax3/7|PRD  
QRRSRTTFTAQLEELEKAFERTHYPDIYTREELAQRACLTEARVQVWFSNRRARWRKQA  
>Chicken|PAX7|Pax3/7|PRD  
QRRSRTTFTAQLEELEKAFERTHYPDIYTREELAQRACLTEARVQVWFSNRRARWRKQA  
>Zebrafish|pax7a|Pax3/7|PRD  
QRRSRTTFTAQLEELEKAFERTHYPDIYTREELAQRACLTEARVQVWFSNRRARWRKQ  
>Zebrafish|pax7b|Pax3/7|PRD  
QRRSRTTFTAQLEELEKAFERTHYPDIYTREELAQRACLTEARVQVWFSNRRARWRKQA  
>Human|PAX8|Pax2/5/8|PRD  
KHLRTDAFSQHHLEPLECPFERQHYPEAYASPS  
>Chicken|Pbx-l|Pbx|TALE  
RRKRRNFNKQATEILNEYFYSHLSNPYPSEEAKEELAKKCGITVSQV  
>Zebrafish|Pbx-l|Pbx|TALE  
ARRKRRNFNKQATEILNEYFYSHLSNPYPSEEAKEELAKKCSITVSQVSNWFGNKRIRYKNI

>Human|PBX1|Pbx|TALE  
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>Chicken|PBX1|Pbx|TALE  
ARRKRRNFNKQATEILNEYFYSHLSNPYPSEEAKEELAKKCGITVSQVSNWFGNKRIRYKKN  
>Zebrafish|pbx1a|Pbx|TALE  
ARRKRRNFNKQATEILNEYFYSHLSNPYPSEEAKEELAKKCSITVSQVSNWFGNKRIRYKKN  
>Human|PBX2|Pbx|TALE  
ARRKRRNFQKQATEVLNEYFYSHLSNPYPSEEAKEELAKKCGITVSQVSNWFGNKRIRYKKN  
>Zebrafish|pbx2|Pbx|TALE  
ARRKRRNFQKQATEVLNEYFYSHLSNPYPSEEAKEELAKQCSITVSQVSNWFGNKRIRYKKN  
>Chicken|Pbx2-l|Pbx|TALE  
RRKRRNFQKQATEVLNEYFYSHLSNPYPSEEAKEELAKKGGITVSQV  
>Human|PBX3|Pbx|TALE  
ARRKRRNFQKQATEILNEYFYSHLSNPYPSEEAKEELAKKCSITVSQVSNWFGNKRIRYKKN  
>Chicken|PBX3|Pbx|TALE  
ARRKRRNFQKQATEILNEYFYSHLSNPYPSEEAKEELAKKCSITVSQVSNWFGNKRIRYKKN  
>Zebrafish|pbx3a|Pbx|TALE  
ARRKRRNFQKQATEILNEYFYSHLSNPYPSEEAKEELAKKCAITVSQVSNWFGNKRIRYKKN  
>Zebrafish|pbx3b|Pbx|TALE  
ARRKRRNFQKQATEILNEYFYSHLSNPYPSEEAKEELAKKCSITVSQVGGTTITVAQVSNWFGNKRIRYKKN  
>Human|PBX4|Pbx|TALE  
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>Zebrafish|pbx4|Pbx|TALE  
ARRKRRNFNKQATEVLNEYFYSHLSNPYPSEEAKEELAKKCGITVSQVSNWFGNKRIRYKKN  
>Human|PDX1|Pdx|ANTP  
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>Chicken|PDX1|Pdx|ANTP  
NKRTTRAYTRAQLLELEKEFLFNKYISRPRRVELAVMLNLTERHIKIWFQNRMMKWKKEE  
>Zebrafish|pdx1|Pdx|ANTP  
NKRTTRAYTRAQLLELEKEFLFNKYISRPRRVELALTLSTERHIKIWFQNRMMKWKKEE  
>Zebrafish|Phox-l|Phox|PRD  
QRRVRTIFTSQALKALERAFAHTQYPDIYTREELVQEIQLTEARVQVWFQNRRAKFRKQE  
>Human|PHOX2A|Phox|PRD  
QRRIRTTFTSAQLKELERVFAETHYPDIYTREELALKIDLTEARVQVWFQNRRAKFRKQE  
>Zebrafish|phox2a|Phox|PRD  
QRRIRTTFTSSQLKELERVFAETHYPDIYTREELALKIDLTEARVQVWFQNRRAKFRKQE  
>Human|PHOX2B|Phox|PRD  
QRRIRTTFTSAQLKELERVFAETHYPDIYTREELALKIDLTEARVQVWFQNRRAKFRKQE  
>Chicken|PHOX2B|Phox|PRD  
QRRIRTTFTSAQLKELERVFAETHYPDIYTREELALKIDLTEARVQVWFQNRRAKFRKQE  
>Zebrafish|phox2b|Phox|PRD  
QRRIRTTFTSAQLKELERVFAETHYPDIYTREELALKIDLTEARVQVWFQNRRAKFRKQE  
>Zebrafish|phox2b-l|Phox|PRD  
QRRIRTTFTSAQLKELERVFAETHYPDIYTREELALKIDLTEARVQVWFQNRRAKFRKQE  
>Human|PITX1|Pitx|PRD  
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>Chicken|PITX1|Pitx|PRD  
QRRQRTHFTSQQLQELEATFQRNRYPDMSMREEIAVWTNLTEPRVRVWFKNRRAKWRKRE  
>Zebrafish|pitx1|Pitx|PRD  
QRRQRTHFTSQQLQELEATFQRNRYPDMSTREEIAVWTNLTEARVRVWFKNRRAKWRKRE  
>Human|PITX2|Pitx|PRD  
QRRQRTHFTSQQLQELEATFQRNRYPDMSTREEIAVWTNLTEARVRVWFKNRRAKWRKRE  
>Chicken|PITX2|Pitx|PRD  
QRRQRTHFTSQQLQELEATFQRNRYPDMSTREEIAVWTNLTEARVRVWFKNRRAKWRKRE  
>Zebrafish|pitx2|Pitx|PRD  
QRRQRTHFTSQQLQELEATFQRNRYPDMSTREEIAVWTNLTEARVRVWFKNRRAKWRKRE  
>Human|PITX3|Pitx|PRD

QRRQRTHFTSQQLQELEATFQRNRYPD MSTREEIAVWTNLTEARVRVWFKNRRRAKWRKRE  
>Chicken | PITX3 | Pitx | PRD  
QRRQRTHFTSQQLQELEATFQRNRYPD MSTREEIAVWTNLTEARVRVWFKNRRRAKWRKRE  
>Zebrafish | pitx3 | Pitx | PRD  
QRRQRTHFTSQQLQELEATFQRNRYPD MSTREEIAVWTNLTEARVRVWFKNRRRAKWRKRE  
>Human | PKNOX1 | Pknox | TALE  
SKNKRGVLPKHATNMRSWLFQHIGHYPYTEDEKKQIAAQTNL TLLQVNNWFINARRRILQPM  
>Chicken | PKNOX1 | Pknox | TALE  
SKNKRGVLPKHATNMRSWLFQHIGHYPYTEDEKKQIAAQTNL TLLQVNNWFINARRRILQPM  
>Zebrafish | pknox1.1 | Pknox | TALE  
KNKRGVLPKQATNMRSWLFQHIAHPYPTEEEKKQIATQTNLTLLQVNNWFINARRRILQPM  
>Zebrafish | pknox1.2 | Pknox | TALE  
SKAKRGILPKHATNMRSWLFQHIGHYPYTEDEKKQIALQTNLTLLQVNNWFINARRRILQPM  
>Zebrafish | pknox1.3 | Pknox | TALE  
KNKRGVLPKQATNMRSWLFQHIAHPYPTEEEKKQIATQTNLTLLQVNNWFINARRRILQPM  
>Human | PKNOX2 | Pknox | TALE  
SKNKRGVLPKHATNIMRSWLFQHLMHPYPYTEDEKRQIAAQTNL TLLQVNNWFINARRRILQPM  
>Chicken | PKNOX2 | Pknox | TALE  
SKNKRGVLPKHATNIMRSWLFQHLMHPYPYTEDEKRQIAAQTNL TLLQVNNWFINARRRILQPM  
>Zebrafish | pknox2 | Pknox | TALE  
SKNKRGVLPKHATNIMRSWLFQHLMHPYPYTEDEKRQIAAQTNL TLLQVNNWFINARRRILQPM  
>Zebrafish | pnx | unassigned | Other  
KRIRTAFTLDQLRILERSFQSSHYLSVFERHCIASALGLSETQVKIWFQNRRTKWKKE  
>Human | POU1F1 | Pou1 | POU  
KRKRRTTISIAAKDALERHFGEQNKPSSEIMRMAEELNLEKEVVRVWFCNRRQREKRVK  
>Chicken | POU1F1 | Pou1 | POU  
KRKRRTTISISAKEALERHFGEQSKPSSEIMRMAEGLNLEKEVVRVWFCNRRQREKRVK  
>Zebrafish | pou1f1 | Pou1 | POU  
KRKRRTTISLGAKEALERSFVEKSKPSSEIVRMAEGLHLEKEVVRVWFCNRRQREKRVK  
>Zebrafish | Pou2-l | Pou2 | POU  
KRKKRTSIETNIKLTLEKRFLDNPKPNSEIITLISEQLAMEKEVVRVWFCNRRQKEKRI  
>Human | POU2F1 | Pou2 | POU  
RRKKRTSIETNIRVALEKSFLENQKPTSEEITMIADQLNMEKEVIRVWFCNRRQKEKRIN  
>Chicken | POU2F1 | Pou2 | POU  
RRKKRTSIETNIRVALEKSFLENQKPTSEEITMIADQLNMEKEVIRVWFCNRRQKEKRIN  
>Zebrafish | pou2f1a | Pou2 | POU  
RRKKRTSIETSIRIALERSFLEQSQKPSSEIITLIADQLSMEKEVVRVWFCNRRQKEKRIN  
>Zebrafish | pou2f1b | Pou2 | POU  
RRKKRTSIETNIRVALEKSFLEQNQKPTSEEITMIADQLNMEKEVIRVWFCNRRQKEKRIN  
>Human | POU2F2 | Pou2 | POU  
RRKKRTSIETNVRFALEKSFLANQKPTSEEILLIAEQLHMEKEVIRVWFCNRRQKEKRIN  
>Zebrafish | pou2f2 | Pou2 | POU  
RRKKRTSIETNVRVALEHSFLANQKPTSEEILLISEKLNMEKEVIRVWFCNRRQKEKRIN  
>Chicken | Pou2f2-l | Pou2 | POU  
QNQKPTSEEILLIAEQLHMEKEVIRVWFCNRRQKEKR  
>Human | POU2F3 | Pou2 | POU  
KRKKRTSIETNIRLTLEKRFQDNPKPSSEIISMIAEQLSMEKEVVRVWFCNRRQKEKRIN  
>Chicken | POU2F3 | Pou2 | POU  
KRKKRTSIETNIRSTLEKRFQDNPKPSSEIISLIAEQLSMEKEVVRVWFCNRRQKEKRIS  
>Human | POU3F1 | Pou3 | POU  
KRKKRTSIEVGKGALESHFLKCPKPSAHEITGLADSLQLEKEVVRVWFCNRRQKEKRMT  
>Zebrafish | pou3f1 | Pou3 | POU  
KRKKRTSIEVGKGALENHFLKCPKPSAHEITTLAGTLQLEKEVVRVWFCNRRQKEKRMT  
>Human | POU3F2 | Pou3 | POU  
KRKKRTSIEVSVKGALESHFLKCPKPSAQEITSLADSLQLEKEVVRVWFCNRRQKEKRMT  
>Zebrafish | pou3f2 | Pou3 | POU  
KRKKRTSIEVSVKGALESHFLKCPKPAASEITSLADSLQLEKEVVRVWFCNRRQKEKRMT

>Human|POU3F3|Pou3|POU  
KRKKRTSIEVSVKGALESHFLKCPKPSAQEITNLADSLQLEKEVVRVWFCNRRQKEKRM  
>Zebrafish|pou3f3a|Pou3|POU  
KRKKRTSIEVSVKGALESHFLKCPKPSAQEITSLADNLQLEKEVVRVWFCNRRQKEKRM  
>Zebrafish|pou3f3b|Pou3|POU  
KRKKRTSIEVSVKGALESHFLKCPKPSAQEITSLADNLQLEKEVVRVWFCNRRQKEKRM  
>Human|POU3F4|Pou3|POU  
KRKKRTSIEVSVKGVLETHFLKCPKPAQEISSLADSLQLEKEVVRVWFCNRRQKEKRM  
>Human|POU4F1|Pou4|POU  
KKRKRRTSIAAPEKRSLEAYFAVQPRPSSEKIAAIAEKLDLKKNVVRVWFCNQKQKRMK  
>Zebrafish|pou4f1|Pou4|POU  
KKRKRRTSIAAPEKRSLEAYFAVQPRPSSEKIAAIAEKLDLKKNVVRVWFCNQKQKRLK  
>Human|POU4F2|Pou4|POU  
KKRKRRTSIAAPEKRSLEAYFAIQPRPSSEKIAAIAEKLDLKKNVVRVWFCNQKQKRMK  
>Zebrafish|pou4f2|Pou4|POU  
KKRKRRTSIAAPEKRSLEAYFAIQPRPSSEKIAAIAEKLDLKKNVVRVWFCNQKQKRMK  
>Human|POU4F3|Pou4|POU  
RKRKRRTSIAAPEKRSLEAYFAIQPRPSSEKIAAIAEKLDLKKNVVRVWFCNQKQKRMK  
>Zebrafish|pou4f3|Pou4|POU  
RKRKRRTSIAAPEKRSLEAYFAIQPRPSSEKIAAIAEKLDLKKNVVRVWFCNQKQKRMK  
>Human|POU5F1|Pou5|POU  
RKRKRRTSIENVRGNLENLFLQCPKPTLQQISHIAQQLGLEKDVVRVWFCNRRQKGRSS  
>Zebrafish|pou5f1|Pou3|POU  
KRKRRTSLEGTVRSALSYFVKCPKPNLEITHISDDLGLERDVVRVWFCNRRQKGRKRL  
>Human|POU5F2|Pou5|POU  
GKWRRASRERRIGNSLEKFFQRCPKPTPQQISHIAGCLQLQKDVVRVWFYNRSKMGSRPT  
>Human|POU6F1|Pou6|POU  
KRKRRTSFTPQAIEALNAYFEKNPLPTGQEITEIAKELNYDREVVRVWFCNRRQTLKNTS  
>Zebrafish|pou6f1|Pou6|POU  
KRKRRTSFTPQAIEVLNTYFEKNSLPTGQEITEIAKELNYDREVVRVWFCNRRQTLKNTS  
>Human|POU6F2|Pou6|POU  
KRKRRTSFTPQALEILNAHFENKTHPSGQEMTEIAEKLNVDREVVRVWFCNKRQALKNTI  
>Chicken|POU6F2|Pou6|POU  
KRKRRTSFTPQALEILNAHFENKTHPSGQEMTEIAEKLNVDREVVRVWFCNKRQALKNTI  
>Chicken|POUV|Pou3|POU  
KRKRRTSIETNVKGTLESFFRKCVPSPQEISQIAEDLNLDKDVVRVWFCNRRQKGRKRL  
>Human|PROP1|Prop|PRD  
RRRHRTTFSPVQLEQLESAFGRNQYPDIWARESLARDTGLSEARIQVWFQNRRAKQKQKQ  
>Zebrafish|prop1|Prop|PRD  
TTFNEQLEHLELAFRQNHYPDIYYREELARVTKLNEARIQVWFQNRRAKQKQKQD  
>Human|PROX1|Prox|PROS  
GSAMQEGLSPNHLKAKLMFFYTRYPSSNMLKTYFSDVKFNRCITSQLIKWFSNFREFYIYQM  
>Chicken|PROX1|Prox|PROS  
GSAMQEGLSPNHLKAKLMFFYTRYPSSNMLKTYFSDVKFNRCITSQLIKWFSNFREFYIYQM  
>Zebrafish|prox1|Prox|PROS  
GSTIQEGLSPNHLKAKLMFFYTRYPSSNMLKMFSDVKFNRCITSQLIKWFSNFREFYIYQM  
>Zebrafish|prox1b|Prox|PROS  
QEGLSPCHLKKAKLMFFYTRYPSSSTLKYFPDVKFNRCVTSQLIKWFSNFREFYIYQM  
>Human|PROX2|Prox|PROS  
LVHIQEGLNPGHLKAKLMFFFTRYPSSNLLKVYFPDVQFNRCITSQMIKWFSNFREFYIYQM  
>Chicken|Prox2|Prox|PROS  
HIQEGLSPGHLKAKLMFFFTRYPSSSLLKAYFPDVQFNRCITSQMIKWFSNFREFYIYQM  
>Zebrafish|prox2|Prox|PROS  
IQEGLTPNHLKAKLMFFYTRYPSSNLLKNFFPDVKFNRCITSQLIKWFSNFREFYIYQM  
>Human|PRRX1|Prrx|PRD  
QRRNRRTTFNSSQLQALERVFERHYPDAFVREDLARRVNLTEARVQVWFQNRRAKFRNE  
>Chicken|PRRX1|Prrx|PRD

QRRNRTTFNSSQLQALERVFERHYPDAFVREDLARRVNLTEARVQVWFQNRRAKFRNE  
>Zebrafish|prx1a|Prrx|PRD  
QRRNRTTFNSSQLQALERVFERHYPDAFVREDLARRVNLTEARVQVWFQNRRAKFRNE  
>Zebrafish|prx1b|Prrx|PRD  
QRRNRTTFNSSQLQALERVFERHYPDAFVREDLARRVNLTEARVQVWFQNRRAKFRNE  
>Human|PRRX2|Prrx|PRD  
QRRNRTTFNSSQLQALERVFERHYPDAFVREELARRVNLSEARVQVWFQNRRAKFRNE  
>Chicken|PRRX2|Prrx|PRD  
QRRNRTTFNSSQLQALERVFERHYPDAFVREELARRVNLSEARVQVWFQNRRAKFRNE  
>Human|RAX|Rax|PRD  
HRRNRTTFTTYQLHELERAFAEKSHYPDVYSREELAGKVNLPVVRVQVWFQNRRAKWRRQE  
>Human|RAX2|Rax|PRD  
HRRNRTTFTTYQLHQLERAFAESHYPDVYSREELAAKVHLPVVRVQVWFQNRRAKWRRQE  
>Human|RHOXF1|Rhox|PRD  
PRTRRTKFTLLQVEELESVFRHTQYDPVTRRELAENLGVTEDKVRVWFKNKRARCRRHQ  
>Human|RHOXF2|Rhox|PRD  
QQPNVHAFTPLQLQELERIFQREQFPSEFLRRRLARSMNVTELAQVWFENRRRAKWRRHQ  
>Human|RHOXF2B|Rhox|PRD  
QQPNVHAFTPLQLQELERIFQREQFPSEFLRRRLARSMNVTELAQVWFENRRRAKWRRHQ  
>Zebrafish|rx1|Rax|PRD  
HRRNRTTFTTYQLHELERAFAEKSHYPDVYSREELAMKVNLPVVRVQVWFQNRRAKWRRQE  
>Chicken|RX2|Rax|PRD  
HRRNRTTFTTYQLHELERAFAEKSHYPDVYSREELAMKVNLPVVRVQVWFQNRRAKWRRQE  
>Zebrafish|rx2|Rax|PRD  
HRRNRTTFTTYQLHELERAFAEKSHYPDVYSREELAMKVNLPVVRVQVWFQNRRAKWRRQE  
>Zebrafish|rx3|Rax|PRD  
HRRNRTTFTTFQLHELERAFAEKSHYPDVYSREELALKVNLPVVRVQVWFQNRRAKWRRQE  
>Human|SATB1|Satb|CUT  
KTRPRTKISVEALGILQSFIQDVGLYPDDEAIQTLAQDLDPKYTIKFFQNQRYYLKHHG  
>Chicken|SATB1|Satb|CUT  
KPRPRTKISVEALGILQSFIQDVGLYPDDEAIQTLAQDLDPKYTIKFFQNQRYYLKHHG  
>Human|SATB2|Satb|CUT  
KPRSRTKISLEALGILQSFIDVGLYPDQEAIHLSAQDLDPKHTIIFQNQRYHVKHHG  
>Chicken|SATB2|Satb|CUT  
KPRSRTKISLEALGILQSFIDVGLYPDQEAIHLSAQDLDPKHTIIFQNQRYHVKHHG  
>Zebrafish|satb2|Satb|CUT  
KPRSRTKISLEALGILQSFIQDVGLYPDQEAIHLSAQDLDPKHTIVKFFQNQRYHVKHHG  
>Zebrafish|sb:cb1008|unassigned|Other  
KRPRVLSVQEKQTLFSAYELEPYPSQNTIDRLAAQLGLQTSTVSNWFYNYRSRIRRDGF  
>Human|SEBOX|Sebox|PRD  
HRRKRTTFSKGQLELERAAWPYPNISTHEHLAWVTCLPEAKVQVWFQKRWAKIKNR  
>Chicken|SEBOX|Sebox|PRD  
KRRRTTFSRGLSELERAAVPYPDIATRERLAELTQLPEAKIQVWFQNRARRIR  
>Human|SHOX|Shox|PRD  
QRRSRTNFTLEQLNELERLFDETHYPDAFMREELSQRGLSEARVQVWFQNRRAKCRKQE  
>Zebrafish|shox|Shox|PRD  
QRRSRTNFTLEQLNELERLFDETHYPDAFMREELSQRGLSEARVQVWFQNRRAKCRKQE  
>Human|SHOX2|Shox|PRD  
QRRSRTNFTLEQLNELERLFDETHYPDAFMREELSQRGLSEARVQVWFQNRRAKCRKQE  
>Chicken|SHOX2|Shox|PRD  
QRRSRTNFTLEQLNELERLFDETHYPDAFMREELSQRGLSEARVQVWFQNRKAKCRKQE  
>Zebrafish|shox2|Shox|PRD  
QRRSRTNFTLEQLNELERLFDETHYPDAFMREELSQRGLSEARVQVWFQNRRAKCRKQE  
>Zebrafish|si:ch211-159p3.1|unassigned|Other  
ERLLPLLKAYSQNPEPTEEQLAQVAKTVKLPLAAVTKWYKMRKRILLQ  
>Zebrafish|si:ch211-251d10.5|Cux|CUT  
KKPRVVLAPKEEALKRAYQKPYSPKTIIEELASQLNLKTSTVINWFHNYRYQ

>Zebrafish|si:ch211-260g14.3|Lmx|LIM  
PKRPRTILTQQRRFAFKASFEVSSKPCRKVRTLAAETGLSVRVVQVWFQNRQAKMKKL

>Zebrafish|si:ch73-386h18.1|HD1|Zfhx|ZF  
SKRPRTTRITDDQLRVLRLRQYFDINNSPNEDQIHEMANKSGLPHKVIKHWFRNTLFKERQ

>Zebrafish|si:ch73-386h18.1|HD2|Zfhx|ZF  
KRSSRTRFNDYQLRVLQDFFDANAYPKDDEFEQLSNLLNSTRVIVVWFQNRQKARKNY

>Zebrafish|si:ch73-386h18.1|HD3|Zfhx|ZF  
DKRMRTTITPEQLEVLVQKYLLDSNPTRKMLDHISNEVGLKRVVQVWFQNRTRERKGG

>Zebrafish|si:ch73-386h18.1|HD4|Zfhx|ZF  
KRYRTQMSNLQVKVLKACFSYKTPMTLECEALGNDIGLAKRVVQVWFQNARAKEKKAK

>Zebrafish|si:dkey-3j24.1|Pou2|POU  
RRKKRTSIETNVRIALERNFISNQKPTSEEILLMAEQLNMEKEVIRVWFNRRRQKEKRIN

>Human|SIX1|Six1/2|SINE  
GEETSYCFKEKSRGVLREWYAHNPYSPREKRELAETGLTTTQVSNWFKNRRQRDRAAE

>Chicken|SIX1|Six1/2|SINE  
GEETSYCFKEKSRGVLREWYAHNPYSPREKRELAETGLTTTQVSNWFKNRRQRDRAAE

>Zebrafish|six1a|Six1/2|SINE  
GEETSYCFKEKSRVLEWYTHNPYSPREKRELAETGLTTTQVSNWFKNRRQRDRAAE

>Zebrafish|six1b|Six1/2|SINE  
GEETSYCFKEKSRGVLREWYTHNPYSPREKRELAETGLTTTQVSNWFKNRRQRDRAAE

>Human|SIX2|Six1/2|SINE  
GEETSYCFKEKSRVLEWYAHNPYSPREKRELTEATGLTTTQVSNWFKNRRQRDRAAE

>Zebrafish|six2a|Six1/2|SINE  
GEETSYCFKEKSRVLEWYTHNPYSPREKRELAETGLTTTQVSNWFKN

>Zebrafish|six2b|Six1/2|SINE  
GEETSYCFKEKSRVLEWYTHNPYSPREKRELAETGLTTTQVSNWFKNRRQRDRAAE

>Human|SIX3|Six3/6|SINE  
GEQKTHCFKERTSRLLREWYLQDPYPNPSKKRELAQATGLTPTQVGNWFKNRRQRDRAAA

>Zebrafish|six3a|Six3/6|SINE  
GEQKTHCFKERTSRLLREWYLQDPYPNPSKKRELAQATGLTPTQVGNWFKNRRQRDRAAA

>Zebrafish|six3b|Six3/6|SINE  
GEQKTHCFKERTRLLREWYLQDPYPNPSKKRELAQATGLTPTQVGNWFKNRRQRDRAAA

>Human|SIX4|Six4/5|SINE  
GEETVYCFKEKSRNALKELYKQNRYPSPAERHLAKITGLSLTQVSNWFKNRRQRDRNPS

>Zebrafish|six4.3|Six4/5|SINE  
GEETVYCFKEKSRNALKECYKINRYPTPAEKKNLAKVTGLSLTQVSNWFKNRRQRDRTPS

>Zebrafish|six4a|Six4/5|SINE  
GEETVYCFKERSRNALKDLYKQNRYPSPAERKNLAKITGLSLTQVSNWFKNRRQRDRNPS

>Zebrafish|six4b|Six4/5|SINE  
GEETVYCFKERSRNALKDMYKRNRYPSPAERKNLAKMTGLSLTQVSNWFKNRRQRDRNPS

>Human|SIX5|Six4/5|SINE  
GEETVYCFKERSRAALKACYRGNRYPTPEKRRRLATLTGLSLTQVSNWFKNRRQRDRTGA

>Human|SIX6|Six3/6|SINE  
GEQKTHCFKERTRNLLREWYLQDPYPNPSKKRELAQATGLTPTQVGNWFKNRRQRDRAAA

>Zebrafish|six6a|Six3/6|SINE  
EQKTHCFKERTRHLLREWYLQDPYPNPSKKRELAQATGLTPTQVGNWFKNRRQRDRAAA

>Zebrafish|six6b|Six3/6|SINE  
EQKTHCFKERTRHLLREWYLQDPYPNPSKKRELAQATGLTPTQVGNWFKNRRQRDRAAA

>Zebrafish|six7|Six3/6|SINE  
GEQKTHCFKERTSRLLREWYLQDPYPNPSKRHLAQAATGLTPTQVGNWFKNRRQRDRAAS

>Zebrafish|six9|Six1/2|SINE  
GEETSYCFKEKSRVLEWYCRKPYSPREKRDAAATGLTATQVSNWFKNRRQRDRAAE

>Chicken|SOHO-1|Nk5/Hmx|ANTP  
KKKTRTIFSKSQVFQLESTFDVKRYLSSAERAGLAAALHLETQVKIWFQNRNKLKRQL

>Human|TGIF1|Tgif|TALE  
KRRRRGNLPKESVQILRDWLYEHRYNAYPSEQEKALLSQQTHLSTLQVCNWFNARRRLLPDM

>Chicken|TGIF1|Tgif|TALE

NLPKESVQILRDWLYEHRYNAYPSEQEKVLLSRQTHLSTLQVCNWFNARRRLLPDM  
>Zebrafish|tgif1|Tgif|TALE  
KRKRGRGKLPKESVQILRDWLYQHRYNAYPSEQEKALLSKQTHLSTLQVCNWFNARRRLLPEM  
>Human|TGIF2|Tgif|TALE  
KRKRGRGKLPKESVKILRDWLYLHRYNAYPSEQEKLSLSGQTNLSVLQICNWFNARRRLLPDM  
>Zebrafish|Tgif2|Tgif|TALE  
KRRRRGKLPKESVQVLRDWLYEHRFNAYPSEQEKLSLSGQTHLSVSQICNWFNARRRLLPDL  
>Human|TGIF2LX|Tgif|TALE  
KKKRKGNLPAESVKILRDWMYKHRFKAYPSEEEKQMLSEKTNLSLLQISNWFNARRRILPDM  
>Human|TGIF2LY|Tgif|TALE  
KKKRKGNLPAESVKILRDWMYKHRFKAYPSEEEKQMLSEKTNLSLLRISNWFNARRRILPDM  
>Human|TLX1|Tlx|ANTP  
KKKPRTSFTRLQICELEKRFHRQKYLASAERAALAKALKMTDAQVKTWFQNRRTKWRRQT  
>Chicken|TLX1|Tlx|ANTP  
KKKPRTSFTRLQICELEKRFHRQKYLASAERAALAKALKMTDAQVKTWFQNRRTKWRRQT  
>Zebrafish|tlx1|Tlx|ANTP  
KKKPRTSFTRLQICELEKRFHRQKYLASAERAALAKALKMTDAQVKTWFQNRRTKWRRQT  
>Human|TLX2|Tlx|ANTP  
RKKPRTSFSRSQVLELERRFLRQKYLASAERAALAKALRM TDAQVKTWFQNRRTKWRRQT  
>Zebrafish|tlx2|Tlx|ANTP  
RKKPRTSFSRVQICELEKRFHRQKYLASAERATLAKALKMTDAQVKTWFQNRRTKWRRQT  
>Human|TLX3|Tlx|ANTP  
RKKPRTSFSRVQICELEKRFHRQKYLASAERAALAKSLKMTDAQVKTWFQNRRTKWRRQT  
>Chicken|TLX3|Tlx|ANTP  
RKKPRTSFSRVQICELEKRFHRQKYLASAERAALAKSLKMTDAQVKTWFQNRRTKWRRQT  
>Zebrafish|tlx3b|Tlx|ANTP  
RKKPRTSFSRVQICELEKRFHRQKYLASAERAALAKTLKMTDAQVKTWFQNRRTKWRRQT  
>Human|TPRX1|Tprx|PRD  
QRQERTVYTESQQKVFYFQKQDQYPNYDQRLNLAEMLSLREQQLQVWFKNRRRAKLARER  
>Human|TPRXL|Tprx|PRD  
QRQDRTIYNWKQQEVLENHFKEEQYDPDYDTRQELAEMLNLEQVQVWFKNRRRAKRSRER  
>Zebrafish|trh1|unassigned|Other  
VRDRVRLHITPVPKLEAFYLQKKKTEPSQEDLQALVKLGLSERQIQSWLRRRRRIQDRPA  
>Human|TSHZ1|Tshz|ZF  
RKGRQSNWNPQHLLILQAQFASSLRETTEGKYIMSDLGPQERVHISKFTGLSMTTISHWLANVKYQLRRTG  
>Chicken|TSHZ1|Tshz|ZF  
RKGRQSNWNPQHLLILQAQFASSLRETSEGKYIMSDLGPQERVHISKFTGLSMTTISHWLANVKYQLRRTG  
>Zebrafish|tshz1|Tshz|ZF  
RKGRQSNWNPQHLLILQAQFASSLRETPDGKYIITDLGPQERVHICKFTGLSMTTISHWLANVKYQLRRTG  
>Human|TSHZ2|Tshz|ZF  
RKGRQSNWNPQHLLILQAQFASSLFQTSEGKYLLSDLGPQERMQISKFTGLSMTTISHWLANVKYQLRKTG  
>Chicken|TSHZ2|Tshz|ZF  
RKGRQSNWNPQHLLILQAQFASSLFQTSEGKYLLSDLGPQERMQISKFTGLSMTTISHWLANVKYQLRKTG  
>Zebrafish|tshz2|Tshz|ZF  
RKGRQSNWNPQHLLILQAQFASSLFQTSEGKYLLSDLGPQERMHISKFTGLSMTTISHWLANVKYQLRKTG  
>Human|TSHZ3|Tshz|ZF  
RKGRQSNWNPQHLLILQAQFAASLRQTSEGKYIMSDLSPQERMHISRFTGLSMTTISHWLANVKYQLRRTG  
>Chicken|TSHZ3|Tshz|ZF  
RKGRQSNWNPQHLLILQAQFAASLRQTSEGKYIMSDLSPQERMHISRFTGLSMTTISHWLANVKYQLRRTG  
>Zebrafish|tshz3b|Tshz|ZF  
RKGRQSNWNPQHLLILQAQFASSLRQTGDGKYIMSDLSPQERMHISRFTGLSMTTISHWLANVKYQLRRTG  
>Human|UNCX|Uncx|PRD  
RRRTRTNFTGWQLEELEKAFNESHYPDVFMRREALALRLDLVESRVQVWFQNRRAKWRKKE  
>Chicken|UNCX|Uncx|PRD  
RRRTRTNFTGWQLEELEKAFNESHYPDVFMRREALALRLDLVESRVQV  
>Zebrafish|uncx|Uncx|PRD  
RRRTRTNFTGWQLEELEKAFNESHYPDVFMRREALALRLDLIESRVQVWFQNRRAKWRKKE

>Zebrafish|uncx4.1|Uncx|PRD  
RRRTRTNFTGWQLEEELEKASNESHYPDVMREALALRLDLVESRVQVWFQNRRAKWRKKE  
>Zebrafish|Uncx1-2|Uncx|PRD  
QRRRARANYSSWQLEEELEKTFQSTHYPDIFMREALALRLDLIEARVQVWFQNRRAKMRRQL  
>Human|VAX1|Vax|ANTP  
PKRTRTSFTAELRLEMEFQRCQYVVGRETELARQLNLSETQVKVWFQNRRTKQKKDQ  
>Chicken|VAX1|Vax|ANTP  
PKRTRTSFTAELRLEMEFQRCQYVVGRETELARQLNLSETQVKVWFQNRRTKQKKDQ  
>Zebrafish|vax1|Vax|ANTP  
PKRTRTSFTAELRLEMEFQRCQYVVGRETELARQLNLSETQVKVWFQNRRTKQKKDQ  
>Human|VAX2|Vax|ANTP  
PKRTRTSFTAELRLEMEFQRCQYVVGRETELARQLNLSETQVKVWFQNRRTKQKKDQ  
>Zebrafish|vax2|Vax|ANTP  
PKRTRTSFTAELRLEMEFQRCQYVVGRETELARQLNLSETQVKVWFQNRRTKQKKDQ  
>Zebrafish|ved|unassigned|Other  
RRPRTAFSSEQISSLERVFKRNAYLGAQDKAELCRTLKLTDKQIRNWFQNRMMKLR  
>Human|VENTX|Ventx|ANTP  
APRVRTAFTMEQVRTLEGVFQHHQYLSPLERKRLAREMQLSEVQIKTWQFQNRMMKHKRQM  
>Chicken|VENTX|Ventx|ANTP  
RLRTAFSAEQISTLESSFQRHRYLGAERKLAGRMRLSEVQIKTWQFQNRMMKLRQL  
>Zebrafish|vox|unassigned|Other  
RIRTKFTPEQIDKLEKIFNKHKYLDAGERVKTALKLGLSETQIRTWQFQNRMMKLRKREV  
>Human|VSX1|Vsx|PRD  
KRRHRTVFTAHLQLEEELEKAFSEAHYPDVYAREMLAVKTELPELDRIVWFQNRRAKWRKRE  
>Chicken|VSX1|Vsx|PRD  
KRRHRTVFTAHLQLEEELEKAFNEAHYPDVYAREMLAVKTELPELDRIVWFQNRRAKWRKRE  
>Zebrafish|vsx1|Vsx|PRD  
KRRHRTVFTSHQLEEELEKAFNEAHYPDVYAREMLAMKTELPELDRIVWFQNRRAKWRKRE  
>Human|VSX2|Vsx|PRD  
KRRHRTIFTSYQLEEELEKAFNEAHYPDVYAREMLAMKTELPELDRIVWFQNRRAKWRKRE  
>Chicken|VSX2|Vsx|PRD  
KRRHRTIFTSYQLEEELEKAFNEAHYPDVYAREMLAMKTELPELDRIVWFQNRRAKWRKRE  
>Zebrafish|vsx2|Vsx|PRD  
KRRHRTIFTSYQLEEELEKAFNEAHYPDVYAREMLAMKTELPELDRIVWFQNRRAKWRKRE  
>Zebrafish|wu:fa03a11|HD1|Zfhx|ZF  
TSSPQREDCEALGREVGLSGEEVRKWF  
>Zebrafish|wu:fa03a11|HD2|Zfhx|ZF  
RRSRTIIHADQLDILYGCYFKDPNPGKHEFEQISEWVNLPKKVVQIWFQNMRRERKRG  
>Zebrafish|wu:fa03a11|HD3|Zfhx|ZF  
RRPRTHLTSLQSLQSCYETCAHPNALECEAVGTELGLPLKVVQIWFQNTRAKEKR  
>Zebrafish|wu:fi69e09|Nobox|PRD  
KKKTRTFYSTDQLEELERVFDHYPDGDGRKEIAAAIGVTPQRIMVWFQNRRAKWRK  
>Human|ZEB1|Zeb|ZF  
GNLSPSQPPLKNLLSLLKAYYALNAQPSAEELSKIADSVNLPLDVVKKWFEKMQAGQISVQ  
>Chicken|ZEB1|Zeb|ZF  
NLSPGQPPLKNLLSLLKAYYALNAQPSAEELSKIADSVNLPLDVVKKWFEKMQAGQISVQ  
>Zebrafish|zeb1|Zeb|ZF  
LCPGQPPLKNLLSLLKAYFALNNEPTKEELAKISESVSLPAEVVKKWFEKMQAGQISM  
>Human|ZEB2|Zeb|ZF  
GMTSPINPYKDHMSVLKAYYAMNMEPNSDELLKISIAVGLPQEFVKEWFEQRKVVYQYSNS  
>Chicken|ZEB2|Zeb|ZF  
GMTSPINPYKDHMSVLKAYYAMNMEPNSDELLKISIAVGLPQEFVKEWFEQRKVVYQY  
>Zebrafish|zeb2b|Zeb|ZF  
LNGPISPYKDHMSVLKAYFAMNMEPNSDELLKISIAVGLPQEFVKEWFEQRKVFQYTTS  
>Human|ZFH2|HD1|Zfhx|ZF  
RRFSRTKFTFQALQSFSETSAYPKDGEVERLASLLGLASRVVVVWFQNRARQKARKNA  
>Human|ZFH2|HD2|Zfhx|ZF

DKRLRTTILPEQLEILYRWYMQDSNPTRKMLDCISEEVGLKRRVVQVWFQNTRARERKGG  
>Human|ZFHX2|HD3|Zfhx|ZF  
QRRYRTQMSSLQKIMKACYEAYRPTMQECEVLGEEIGLPKRVIQVWFQNARAKEKKAK  
>Human|ZFHX3|HD1|Zfhx|ZF  
NKRPRTRITDDQLRVLQRQYFDINNSPSEEQIKEMADKSGLPQKVIKHWFRNTLFKERQRN  
>Human|ZFHX3|HD2|Zfhx|ZF  
KRSSRTRFTDYQLRVLQDFFDANAYPKDDEFEQLSNLLNLPTRVIVVWFQNARQKARKNY  
>Human|ZFHX3|HD3|Zfhx|ZF  
DKRLRTTITPEQLEILYQKYLDSNPTRKMLDHAIEVGLKRRVVQVWFQNTRARERKGG  
>Human|ZFHX3|HD4|Zfhx|ZF  
QKRFRTQMTNLQKVLKSCFNDRPTMLECEVLGNDIGLPKRVVQVWFQNARAKEKSK  
>Chicken|ZFHX3|HD1|Zfhx|ZF  
NKRPRTRITDDQLRVLQRQYFDINNSPSEEQIKEMADKSGLPQKVIKHWFRNTLFKERQRN  
>Chicken|ZFHX3|HD2|Zfhx|ZF  
KRSSRTRFTDYQLRVLQDFFDANAYPKDDEFEQLSNLLNLPTRVIVVWFQNARQKARKNY  
>Chicken|ZFHX3|HD3|Zfhx|ZF  
DKRLRTTITPEQLEILYQKYLDSNPTRKMLDHAIEVGLKRRVVQVWFQNTRARERKGG  
>Chicken|ZFHX3|HD4|Zfhx|ZF  
KRFRTQMTNLQKVLKSCFNDRPTMLECEVLGNDIGLPKRVVQVWFQNARAKEKSK  
>Zebrafish|Zfhx3-l|HD1|Zfhx|ZF  
RTRITDDQLRVLQRQYFDINNSPNEEQIKEMADKSGLPQKVIKHWFRNTLFKERQ  
>Zebrafish|Zfhx3-l|HD2|Zfhx|ZF  
KRSSRTRFTDYQLRVLQDFFDANAYPKDDEFEQLSNLLNLPTRVIVVWFQNARQKARKNY  
>Zebrafish|Zfhx3-l|HD3|Zfhx|ZF  
RTTITPEQLEILYQKYLDSNPTRKMLDHAIEVGLKRRVVQVWFQNTRARERK  
>Zebrafish|Zfhx3-l|HD4|Zfhx|ZF  
RTQMTNLQKVLKSCFSYRPTMLECEVLGNDIGLPKRVVQVWFQNARAKEK  
>Human|ZFHX4|HD1|Zfhx|ZF  
FKRPRTRITDDQKILRAYFDINNSPSEEQIQEMAESGLSQKVIKHWFRNTLFKERQRN  
>Human|ZFHX4|HD2|Zfhx|ZF  
KRSSRTRFTDYQLRVLQDFFDTNAYPKDDEIEQLSTVLNLPTRVIVVWFQNARQKARKSY  
>Human|ZFHX4|HD3|Zfhx|ZF  
DKRLRTTITPEQLEILYKYLDSNPTRKMLDHAIEVGLKRRVVQVWFQNTRARERKGG  
>Human|ZFHX4|HD4|Zfhx|ZF  
HKRFRTQMSNLQKVLKACFSYRPTMQECEMLGNEIGLPKRVVQVWFQNARAKEKFK  
>Chicken|ZFHX4|HD1|Zfhx|ZF  
FKRPRTRITDDQKILRAYFDINNSPSEEQIQEMAESGLSQKVIKHWFRNTLFKERQRN  
>Chicken|ZFHX4|HD2|Zfhx|ZF  
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>Chicken|ZFHX4|HD3|Zfhx|ZF  
DKRLRTTITPEQLEILYKYLDSNPTRKMLDHAIEVGLKRRVVQVWFQNTRARERKGG  
>Chicken|ZFHX4|HD4|Zfhx|ZF  
HKRFRTQMSNLQKVLKACFSYRPTMQECEMLGNEIGLPKRVVQVWFQNARAKEKFK  
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KKRKRTSIAAPEKRSLEAYFAVQPRPSEKIAAIAEKLDLKNVVRVWFQCNQRQKQKRMK  
>Zebrafish|zgc:171494|unassigned|Other  
VKDKIRKRASHNPLETYRTHSKHPTQADVKGVCCKLWGSERQVERWFRQRNQRDPGV  
>Zebrafish|zgc:193933|Ventx|ANTP  
RKTRAAFSEEQMNALVNRFNQRYLTPAEMKTLGATGLTYKQVKTWFQNRMMKLKRHQ  
>Zebrafish|zgc:91944|Hmbox|HNF  
RRGRSFTWRKECQSIMESFFIENQYPDEAKREEIANACNAVIQKPGCKLSEFERVTALKVYNWFANRRKEMKRRA  
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>Zebrafish|Zh-l|HD1|Zhx/Homez|ZF  
LVEAFNSFPYPTSQEASALARKCALPPDQVKAWF  
>Zebrafish|Zh-l|HD2|Zhx/Homez|ZF  
KKSQAQLMALRRSFVNKSWPSDGEVQRLQKMTGLSRREIRKWFADSRYLKNGR

>Zebrafish|Zhx-1|HD3|Zhx/Homez|ZF  
KKTREQLEMLRQSFLCCQWPTSDDYEILQKKTGLTRTEIIQWYGDTRYHVKHNO  
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NSIPTYNAAALDNNPLLLNTYNKFPYPTMSEITVLSAQAKYTEEQIKIWFSQAQLKHGVSW  
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SFGIRAKKTKEQLAELKVSYLKNQFPDSEIIRLMKITGLTKGEIKKWFSDFRYNQRNSK  
>Human|ZHX1|HD3|Zhx/Homez|ZF  
TPQKFKEKTAEQLRVLQASFLNSSLTDEELNRLRAQTCLRREIDAWFTEKKKSKALKE  
>Human|ZHX1|HD4|Zhx/Homez|ZF  
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>Human|ZHX1|HD5|Zhx/Homez|ZF  
DRGPSLIKFKTGTAILKDYYLKHKFLNEQDLDELVNKSHMGYEQVREWFARQRRESELGI  
>Chicken|ZHX1|HD1|Zhx/Homez|ZF  
NSIPTYNTALDNNPLLLNTYNKFPYPTMSEITVLSTQAKYTEEQIKIWFSQAQLKHGVSW  
>Chicken|ZHX1|HD2|Zhx/Homez|ZF  
TFGMRAKKTKEQLAELKVSYLKNQFPDSEISRLMKITGLTKGEIKKWFSDFRYNQRNSK  
>Chicken|ZHX1|HD3|Zhx/Homez|ZF  
TPQKFKEKTAEQLQVLQASFLNNPILTDEEMNRLRAQTCLRREIDAWFTERRKSNVLKE  
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PEQLHMLKSSFVRTQWPSPEYKLAEEETGLRSEIVSWFGDTRYAWKNG  
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DRGVSVIKFKTGTAILKDYYMKHKFLNEQDLDELVAKSHMGYEQVREWFARQR  
>Human|ZHX2|HD1|Zhx/Homez|ZF  
LNTTKYNSALDTNATMINSFNKFPYPTQAELSWLTAASKHPPEHIRIWFATQRLKHGISW  
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TPASDRKKTKEQIAHLKASFLQSFPDDAEVYRLIEVTGLARSEIKKWFSDFRYRRCQGI  
>Human|ZHX2|HD3|Zhx/Homez|ZF  
APQKFKEKTQGVKILEDSFLKSSFPTQAELDRLRVETKLSRREIDSWFSERRKLRDSME  
>Human|ZHX2|HD4|Zhx/Homez|ZF  
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>Chicken|ZHX2|HD2|Zhx/Homez|ZF  
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LNTSKYNPSLDDNLTLSFNKFPYPTQAELSWLTAASKHPPEEQIKVWFTTQRLKQGISW  
>Zebrafish|zhx2|HD2|Zhx/Homez|ZF  
EKTPDQIRELTASYAQCQFPDDEEVYRLIETTGLSWGEIKKWFSDFR  
>Zebrafish|zhx2|HD3|Zhx/Homez|ZF  
SSEQMKKLEESFQRTSFPTQAEMEHLVADTRLSKNEIDCWFTERRA  
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>Zebrafish|zhx2|HD5|Zhx/Homez|ZF  
LCLKDMFAQTQWPSPEEYNQLEVQTGLARTEIVRWFKDNRSALKN  
>Human|ZHX3|HD1|Zhx/Homez|ZF  
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>Human|ZHX3|HD2|Zhx/Homez|ZF  
ASIIYKNKKSHEQLSALKGSFCRNQFPQSEVEHLTKVTGLSTREVRKWFSDRRYHCRNLK  
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TPTKYKERAPEQLRALESSFAQNPLPLDEELDRLRSETKMTREIDSWFSERRKKNVNAEE  
>Human|ZHX3|HD4|Zhx/Homez|ZF  
PGKVSCKTAQQRHLLRQLFVQTQWPSNQDYDSIMAQTGLPRPEVVRWFGDSRYALKNGQ  
>Human|ZHX3|HD5|Zhx/Homez|ZF

FPPGLLVIAPGNRELLQDYMMTHKMLYEEDLQNLCDKTMSSQVQKQWFAEKMGEETRAV  
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LKNSFHKFPYPTKAELCYLTVVTKYPEEQKLIWFTAQRLKQGI  
>Chicken|ZHX3|HD2|Zhx/Homez|ZF  
SSIPTYNAAMDSNSFLKNSFHKFPYPTKAELCYLTVVTKYPEEQKLIWFTAQRLKQGISW  
>Chicken|ZHX3|HD3|Zhx/Homez|ZF  
NKKSHQLSALKGSFCRNQFPGQAEVERLTKITGLSTKEIRKWFSDRRYHYRNV  
>Chicken|ZHX3|HD4|Zhx/Homez|ZF  
TKYKERAPEQLKALENSFAQNPQPPEEEVNRLRGETKMTREIDSWFT  
>Chicken|ZHX3|HD5|Zhx/Homez|ZF  
KLNFKKTAQQRHLLKQMFVQTRPTNQEYDAIVSQTGLPRAEVIRWFGDSRYGYKNGQ  
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LKTSFSKFPYPTKAELCYLTVVTKYPEEQIKIWFTAQRLKQGI  
>Zebrafish|zhx3|HD2|Zhx/Homez|ZF  
NKTCKSQEQLSALKESFLISQFPNQEEVDRLINLTGLSVREVRKWFSDRRYHF  
>Zebrafish|zhx3|HD3|Zhx/Homez|ZF  
PHQVRALEASFTQEPDPTSEEVDRLRAETKMTREIHGWFAERRRRV  
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KAKSCTAFSQEQQLHLLQSQKYLSPHQIQELAAAQGLTYQQVKTWFQNQRMKMKRCQ  
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## **Section 2**

>gi\_731274091\_ref\_XP\_010606146.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Fukomys\_damarensis  
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VLNDRFQRQKYLQSLQMQELSSLLNLSYKQVKTWFQNQRMKCKRWQKSNWPQNSTSTPQKGPSPAEYPSVCSNYAQQYLNTSG  
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PPNPQPEDL  
>gi\_884915820\_ref\_XP\_013008419.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Cavia\_porcellus (Used in Figure 1C,  
mammal NANOG group)  
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AGRKLKPYTVLSKMQLCVLRDRFQRQQLNLQHIQELSSLLNLSCKQIKTWFQNQRMKCKKWQKSTGLQNGSGAPEKVPAPAEYPG  
VCSNYAQSLVNTSGNLPWGNQTNWNSAWSSQTWGSQSWGNHSWNTETWNTQSWCPQAWNSPFPFSGEESLQPCLPFPQ  
NFPTSNLEAMLEAVGDSQEYCTTPRPWIFS  
>gi\_533129096\_ref\_XP\_005379670.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Chinchilla\_lanigera  
MNMENNSQSASPLSSGDLTQATPDSSTSPCVTSPCVALPGSLESSGRKEEAAKVPKQKQVVRTVFSQTQLCVLNDRFQRQKYLQ  
QMQELSSLLNLSYKQVKTWFQNQRMKCKRWQKSNWPKSSAGASQTGPASAEYPGSNYTGCMVNTSGNFPVWGNQTNWNSPT  
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DLFLNYAMNLQPEDL  
>gi\_507711545\_ref\_XP\_004647188.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Octodon\_degus  
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KVRMCKKQKVRTVFTQTQLCVLKDQRFQRQKYLQSLQMQELSSFLNLSYKQVKTWFQNQRMKYKRWQKSNWQNSADAPQKGPAPV  
EYPGTCSNYAQGNLNTSGNLPWNSHTWNSAWNTQSWANHSWNTQTNWNSQTCNMQTNWAQTNWAQTNWYPQGWNSP  
YPSGGEELQPCLPFPQSLPANDLEASLEVAGDSQKYLNSPQALDLFLNYAMSLQPEDL  
>gi\_507570058\_ref\_XP\_004668641.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Jaculus\_jaculus  
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SKIQVKKQKVRTVFSQAQLCVLNQRFQKQKYLQSLQMQELSSLDLSYKQVKTWFQNQRMKYKRWQKNNWSKTSHSVQKSTCI  
EYPGLHSSCLPGFLVNPVSGNLPVWSNQTWNNPAWSGQNWSSHSWSTPAWHSPVWSSQPWGAPFHNSGEDSLQPVYQFQQHFS  
GNDLEASLETGGENSKYLNTQALDVLNYSVNMPPDGM  
>gi\_674105035\_ref\_XP\_008823725.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Nannospalax\_galili

MSVDPTDLQTLPSFEKASNSGDSSPTLPSYGPEENDSPLQTPTAEMLNKETASPPSSVSDSPDSSTPTPKLAGSSSEESPGKKEESKVQIK  
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>gi\_589960461\_ref\_XP\_006992807.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Peromyscus\_maniculatus\_bairdii  
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NKVHTKKQKMRTVFSQAQLCALRERFQRQRYLN LQMQELSAI LNLSYKQVKTWFQNRQMKCKRWQKSQWQKSNVGTQKGS AF  
VEYPSLHSSYPQGCLNTSGSPSVWDSQTLTDTWSYQTWTNPTSSNQTWTNSACSNQAL TSLAWSNQAL TD PDWSTQVWNTQSLY  
SQAWNGQAWNTPFHNF GDDSLQPYMQYQQTF SAGDVGASLAATGGSHVYFSTPPGL  
>gi\_110625918\_ref\_NP\_082292.1\_\_homeobox\_protein\_NANOG\_isoform\_1\_Mus\_musculus (Used in Figure 1C,  
mammal NANOG group)  
MSVGLPGPHSLPSSEASNSGNASSMPAVFHPENYSCLQGSATEMLCTEAASPRPSEDLP LQGSPDSSTSPKQKLSSPEADKGPEEEE  
NKVLARKQKMRTVFSQAQLCALKDRFQKQKYLSQLQMQELSSILNLSYKQVKTWFQNRQMKCKRWQKNQWLKTSNGLIQKGSAP  
VEYPSIHC SYPGYL VNASGSLMWSQTWTNPTWSSQTWTNPTWNNQTWTNPTWSSQAWTAQSWNGQPWNAAPLHNFGE  
DFLQPYVQLQQNFASDLEVNLEATRESHAHFSTPQALELFLNYSVTPPGEI  
>gi\_198041502\_ref\_NP\_001094251.1\_\_homeobox\_protein\_NANOG\_Rattus\_norvegicus  
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EENKVLTKKQKMRTVFSQAQLCALKDRFQRQRYLSLQMQDLSTILNLSYKQVKTWFQNRQMKCKRWQKNQWLKTSNGLTQKGS  
APVEYPSIHC SYSGYLMNASGNLPVWGSQTWTNPTWNNQTWTNPTWSNQTWTNPTWSNQAWSTQSWCTQAWNSQTWNA  
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>gi\_532044832\_ref\_XP\_005365227.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Microtus\_ochrogaster  
MKVDPPGPHSLPCCDEAEAVNDGDLSPMPEVHDPEENNSCFQVSVAEKLQKENGSPCFPSVDPPPQDSSDAPNSPITLPAPES EGT  
ENKAEDKVHPRKQKIRTVFSDTQLCALRDRFQRQRYLSLQMQELSAI LNLSYKQVKTWFQNRQMKCKRWQNNQWPRTGNSVTQ  
KGS AFVEYPSLNSSYPQGYLNTSRSLPVWGSQTWTNTWSSQTWTNPTWSKQAWNNQSWCSQAWSSPSWNTPFHNFGEESLQPY  
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>gi\_1032915307\_ref\_XP\_016835052.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Cricetulus\_griseus  
MSVDLPGPHSLPCYGEAEAPNFGDSSPLPEVHGPEENYSCLQVSATELLREETASPCSSVDLSLQDSDPSSTSSKVKLPGPESAEGTEK  
KGEDKAHVKRQKIRTVFSDTQLCALRDRFQRQRYLSLQMQELSAI LNLSYKQVKTWFQNRQMKCKRWQKNQWTKTNINQLFQKD  
SAFVEYSSFHSGYLQGLFNTSESLPMWGSQTWTNTWSNQTWTNTTWSKQAWSNETWTNPAWSNQAWTNPTWSNQAWTNQS  
WCSQACNSQAWNTPFLGEDSLQPYMQCQQNLLASDVEASLEAAGEGHTYFSTPQGLELFLNYSVNTPGE  
>gi\_880876109\_ref\_XP\_012967757.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_homeobox\_protein\_NANOG\_Mesocri  
cetus\_auratus  
MSVGPPNPHSLPCCDEKKAPDFGGLSPVPEVHGPEENYSCLQVSAIGMLRKETTSPCPSVGLPLQDRPDSSTSPK LKHLSPESAEGTE  
KGEDKVHSHKQKIXTVFSDTQLCALKDRFQGXKYLSQLQTELSAILNLSYNQVKTWFQNRQMKCKQWQKNQXPNTNSSVTQKGS A  
CVGYSSFHSSYPQGS LNTXLP MWGSQTWTNTWSNQTXTNPTWSKQAWSNPTWSNQARANKPWCPQVCNSEAWNTPSGEDSLQ  
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VPPPVKKQKSRTVFSQS LCVL NDRFQKQKYLSQLQMQELSTTLNLSYKQVKTWFQNRQMKSKRWLKNSSITQVSGPLEYPSFYPP  
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SEESPVKKEDPQGP GKPKSRTVFSQS LCVLNERFQRQKYLSQLQMQELSRILNLSYKQVKTWFQNRQMKYKRWQKNSWPKNSSD  
LAQMTSEYPAGLCCHQGCLVNAPESLP AWGGQPWNSAAAWGGQA AWGAQSWSGQFPGYEDPQQPALSALPQNPPAGDLESTL  
ESPGEAQNLLQQLKYFSTQQMLDLFPNLPTNMPLGDS  
>gi\_928173559\_ref\_XP\_013963893.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Canis\_lupus\_familiaris (Used in  
Figure 1C, mammal NANOG group)  
MPEVYGPRGNPASLPMSSAETPHAETVSPLPSSMDLLTQDSDPSSTSPRVKLPPTS GEERTARKEDATQGKKQKMRTVFSQTQLYVL  
NDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKSKRWQKSNWPKESNSVTQGYLLNPSGNLPLWSSQAWNNPNWSSQ  
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PNYSEHST  
>gi\_291045284\_ref\_NP\_001166913.1\_\_homeobox\_protein\_NANOG\_Felis\_catus (Used in Figure 1C, mammal  
NANOG group)  
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NPEYPGFYSYHQGYLMNTSGNLPIWGNQ TWNSQSWSNQTWNSQSWSNQTWNSQSWSNQTWNSQSWSNQTWNSQTWCPQAWNGQGWNS  
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>gi\_591327332\_ref\_XP\_007089616.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Panthera\_tigris\_altaica

MNTDPAQPRCPCPEAPDSRDSSPVPEIDGPEENYAPLQMSSAETPHTETVSPLPSCMDLLVQDSDSSTSPRVKVLPTSAAEITAKKD  
DPAQGKKQKIRTVFSQTQLYVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRMKCKRWQKNNWPKNNTVTQNSSA  
NPEYPGFYSYHQGYLMNTSGNLPWGNQWTWNSQSWSNQWTWNSQSWSNQWTWNSQWTWCPQAWNGQAWNSQLHDCGEESPQP  
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>gi\_961713812\_ref\_XP\_014917042.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_homeobox\_protein\_NANOG\_Acinony  
x\_jubatus

MNTDPAQPQCPCPEAPDSRDSSPVPEIDGPEENYAPLQMSSAETPHTETVSPLPSCMDLLVQDSDSSTSPRVKVLPTSAAEITAKKD  
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NPEYPGFYSYHQGYLMNTSGNLPWGNQWTWNSQSWSNQWTGTASRGATRPNSQSWSNQWTWNSQWTWCPQAWNGQAWNSQLHD  
CGEESPQPQIQQLQNSVSDLQSILETTGESHSVIQQTAKYFSAQQIMDLFPNYPEHTA

>gi\_511894037\_ref\_XP\_004766658.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Mustela\_putorius\_fur  
o

MSADPAPPQCRSGPRPPGSRDSSPMPEVCRHEENYAFLOMSSAETPHAETVSPLPSSVDLLVQDSDSSTSPKVKLPPTSAAEERTGRR  
EDTAQGKKQKIRTVFSQTQLYVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRMKCKRWQKNHWPKEKSVTQNSTAA  
TEYPAFYSYHQGHLMNTSANLPWSSQWTWNNPNWSNQTWNSQSWSNHWSWNGQSWSNHWSWTSQWTWCPQAWNSQLHSCGEES  
LQPQIQFQQNSVSDLESLETTGESYSVIQSSAKYFSTQQIMDLFPNYSVNIQPEDV

>gi\_585172740\_ref\_XP\_006738313.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Leptonychotes\_weddellii

MSADPALPLCPPGPEAPSSRDSSPMPEIYGPEENYASLQMSSAETPHAETVSPLPSSMDLLVQDSDSSTSPRVKPPPTSGEERTVRKE  
DMAQGKKQKIRTVFSQTQLYVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRMKCKRWQKNHWPKEKSVSQNSTPT  
TEYPGFYSYHQGYLRNTSGNLPWWSNQTWNNPNWSNQTWNSQSWSNHWSWNGEC

>gi\_752435901\_ref\_XP\_011235450.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_homeobox\_protein\_NANOG\_Ailuropo  
da\_melanoleuca

MSVDPAPPQCPPGPEAPSSRDSNPMPEIYGPEENYASLQMSPAETLHTETVSPPPSSMDLLVQDSDSSTSPRGKLPPTSVEERTVRK  
EDTTQGKKQKIRTVFSQTQLYVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRMKCKRWQKNHWPKEKSVTQNSAAT  
VEYPGFYSYHQGYLMNTSGNLPWWSNQTWNSQSWSNHWSWNGQAWSNHWSWTTQTWCPQAWNSQPCNSQLHSCGEESLXPQIQF  
QPTSVSNVESILETAGESHSVIQSSAKYFSTQQIMDLFPNYSVNIQPEDV

>gi\_671039538\_ref\_XP\_008681710.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Ursus\_maritimus

MSVDPAPPQCPPGPEAPSSRDSNPMPEVYGPENYASLQMSPAETPHTETVSPPPSSMDLLVQDSDSSTSPRGKLPPTSVEERTVRK  
EDTAQGKKQKIRTVFSQTQLYVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRMKCKRWQKNHWPKEKSVTQNSTAT  
AEYPGFYSYHQGYLMNTSGNLPWWSNQTWNSQSWSNHWSWNGQAWSNHWSWNGQAWSNHWSWTSQWTWCPQAWNSQPCNSQLH  
SCGEESLQPQIQFQQNSVSDLESILETTGESHSVIQSSAKYFSTQQIMDLFPNYSVNIQPEDV

>gi\_507710605\_ref\_XP\_004717486.1\_\_PREDICTED\_homeobox\_protein\_NANOG,\_partial\_Echinops\_telfairi

MSVDVASPQNLEASDSKNSSPVTTSLGAKEDGTSLQMSSAEPYSETARSPLPSSVDLLLQKSPDSSTSPKVKLPASAETDAARKESKG  
QGKKQKVRTVFSQTQLCILKDRFQKQKYLSQLQMQELSEVLNLSYKQVKTWFQNRMKCKRWQKTTNWSKNHNAVTVSAPTEY  
LDVCASYHQGCLPSGNLPMWSNQSWSNQAANNQSWNSQAWNN

>gi\_586490173\_ref\_XP\_006875553.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Chrysochloris\_asiatica

MSVADLISQSLPEACDSRVSSPLSTILEAEKNDISLQMSSVEALYSYDVSPLPASIGLLLQDSDSSTSPKVKLPPTSIEKSTMKEGKGLGKK  
QKVRTVFSQMQLCILKDRFQKQKYLSQLQMQELSEVLNLSYKQVKTWFQNRMKCKRWQKNTKWPNSSNGVAQKVSVAEYLDL  
CASYHQGYLPSGNLPMWSNQTWSSQWTWNSQWSSQAWCTQAWNNQSWNTQAWNNQSQICGEEFLLPQFQQNSASDLEASQ  
TIDLFLNDSMNIQPEEV

>gi\_344278136\_ref\_XP\_003410852.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Loxodonta\_africana (Used in  
Figure 1C, mammal NANOG group)

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GKKQKVRTVFSQMQLCILKDRFQKQKYLSQLQMQELSEALNLTQKQVKTWFQNRMKCKRWQKNTNWSKTSNSVTQKVSVPPIEFL  
DLYSSSHQGCPLPSGNLPMWSNQTWNSQWTWNSQSWSNHWSNQAWSNHSWNSQAWSNHWSNQSWSNQSWSNNSQSSWNNQVWN  
NQFQNCGEEFLLPQVQFQQNSVSDLETSQTIDLFLNYSMNIQPEDVVMTGI

>gi\_471411564\_ref\_XP\_004387335.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Trichechus\_manatus\_latirostris

MSVDLASPQSLPEACDSRDSSPISITLGAENYTSLQMSSAEALYSETVSPLPSSMDQLIQDSDSSTSPKIKSPASASIEKSTVKKEGKGG  
GKKQKVRTVFSQTQLCILKDRFQKQKYLSQLQMQELSEVLNLSYKQVKTWFQNRMKCKRWQKNTNWSKNSSGAIQKVSVPTEFL  
DLYSSYHQGCFPSGNLPMWNNQWTWNNSTWSNQTWNSQSWNNHWSNQAWSNHSWNSQAWCTQSWNSQSPWNNQFQNC  
GEDFLLPQIQFQQNSASDLETSQTIDLFLNYSMNIQPEDA

>gi\_504173922\_ref\_XP\_004596526.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Ochotona\_princeps

MSVAAACPQRLPALLEGPDATGSSPAPASPGPEENHPPLQMTSAGTPHTDPATQLLSSAGLLIQDSDSSTSPKVKPLVSVENGAKPEE  
KVKKQKIRTVFSQDQLCVLHDFRQRQKYLSQLQMQELSSILNLTQKQVKTWFQNRMKCKKWQRKNLPNNMIQKGCATAEYPLGC  
SPYQQGCLVNTPENLPVWSSNQTWNGNQTWNNPAWNNPSWSSPSWDSQSWYPQTWNSPLLNCGEEMLQPCVQFSQTCPATE  
FDSVLETAGESLNTVPPAPKHLGTPQALDLLLLSYPVDMQPDDL

>gi\_830180351\_ref\_XP\_012587824.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X2\_Condylura\_cristata

MSVGPVCSQSLPCPETSTSRASSPMPEVYEAEDYSSLPKSSAEMPHTEENVSPSPSSMDLLIQSPDSSTSPRVKLCSTSEENSTEKKEER  
IPVKKQKSRVFSQTQLCVLNDRFQRQKYLSQLQMQELSNLLNLSYKQVKTWFQNRQMKCKRWQKSSWPKSGMTQGCLVNTPEDL  
PIWSNQPWSNPTWGSQSWSPWCTQPWNNQPWNHQAWNSPLHSSGEDPFSPLLQLQNFSLSDLEATLEICGENHNIIQPPSKY  
FSTQQIMDLFPTYSMNAQSEDV

>gi\_478529088\_ref\_XP\_004438717.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Ceratotherium\_simu  
m\_simum

MSVDPALPQSLPCPEASNSGELSPMPEIYEPEENYASLQLSSAETPHMETVSPLPSSMDLLIQSPDSSTSPRVKLLPTSVEKSTVKKEEK  
VQAKKQKIRTVFSQTQLCVLNDRFQRQKYLSQLQMQELSNLLNLSYKQVKTWFQNRQMKCKRWQKNNWPKTCNSVTQKGSATTE  
YPLGLSYHQGSLVNTAGNLPWWSNQTWNNPTWSSQWNSQSWNSHWSWSSQWCSQAWNNQAWNNQAWNNQAWNSQFHS  
SCGEEFLQPQIQFQQNSLVSGLEATLETAGESHTVTQQTAKYFSTQQIMDLFPNYSMNIQPEDV

>gi\_149712673\_ref\_XP\_001498858.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Equus\_caballus (Used  
in Figure 1C, mammal NANOG group)

MSVDPALPQSLPCPEASNSRGSSPVPEIYGPEENYASLQMSSAETPHMETVSPLPSSMELLIQSPDSSTSPRVKLPASAETSEAKKEE  
KVHGKKQKIRTVFSQTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKCKRWQKNNWPKTCNSVTQGSATTD  
YPLGLSYHQGCLVNTAGNVPMWSHQAWNNPAWSNQTWNSQSWNSHWSWNSQWCSQAWNNQAWNNQAWNSPFHSCGED  
FLQPQIQFQQNSPVSDLEATLETAGESHNATQQTAKYFSTQQIMDLFPNYPMNIQPEDM

>gi\_664739579\_ref\_XP\_008527088.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Equus\_przewalskii  
MSVDPALPQSLPCPEASNSRGSSPVPEIYGPEENYASLQMSSAETPHMETEKSIVLFPVSPPLPSSMELLIQSPDSSTSPRVKLPASAE  
TSEAKKEEKVHGKKQKIRTVFSQTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKCKRWQKNNWPKTCNSVT  
QGSATTDYPLGLSYHQGCLVNTAGNVPMWSHQAWNNPAWSNQTWNSQSWNSHWSWNSQWCSQAWNNQAWNNQAWNSP  
FHSCGEDFLQPQIQFQQNSPVSDLEATLETAGESHNATQQTAKYFSTQQIMDLFPNYPMNIQPEDM

>gi\_560992636\_ref\_XP\_006218448.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Vicugna\_pacos  
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AESSTEKQEE  
KVQAKKQKVRTVFSQTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKCKRWQKNNWPRN  
SSSMTQGSATT  
EYPGLSYHQGCLANTSGNLPWGNQTWNSPTWNSQTWNSQSWGSHWSWNSQPWCPQAWNNQWNNQAWNSQF  
NNCVEE  
FLQPHSQLQQNSPFSLEAALESAGESHNVIQQAAYVSPQQQIMDLFPSYSINMQPEDV

>gi\_560932180\_ref\_XP\_006192214.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Camelus\_ferus  
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KVQVKKQKVRTVFSQTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKCKRWQKNNWPRN  
SSSVTQGSATTE  
YPLGLSYHQGCLANTSGNLPWGNQTWNSPTWNSQTWNSQSWGSHWSWNSQPWCPQAWNNQWNNQAWNSQF  
SNCVEEF  
LQPHIQLQQNSPFSLEAALESAGESHNVIQQAAYVSPQQQIMDLFPSYSMNMQPEDV

>gi\_744596718\_ref\_XP\_010989109.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Camelus\_dromedariu  
s

MSADADCPQSLLCPEASNSRETSMPPEPYGPEEDYTSLQMSSAETADTETVSPLPSSMDLLIQSPDSSTSPRVKLPPTS  
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KVQVKKQKVRTVFSQTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKCKRWQKNNWPRN  
SSSVTQGSATTE  
YPLGLSYHQGCLANTSGNLPWGNQTWNSPTWNSQTWNSQSWGSHWSWNSQPWCPQAWNNQWNNQAWNSQF  
SNCVEEF  
LQPHIQLQQNSPFSLEAALESAGESHNVIQQAAYVSPQQQIMDLFPSYSMNMQPEDV

>gi\_743702886\_ref\_XP\_010944669.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Camelus\_bactrianus  
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KVQVKKQKVRTVFSQTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKCKRWQKNNWPRN  
SSSVTQGSATTE  
YPLGLSYHQGCLANTSGNLPWGNQTWNSPTWNSQTWNSQSWGSHWSWNSQPWCPQAWNNQWNNQAWNSQF  
SNCVEEF  
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>gi\_594092986\_ref\_XP\_006069824.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Bubalus\_bubalis  
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QKIRTVFSQTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKCKKWQKNNWPRNSNGMPQGP  
AMAIEYPGFY  
SYHQGCLVNSPGNLPMLGNQTWNNPTWSNQSWSNSQSWNSHWSWNSQAWCPQAWNNQPWNNQFN  
NYMEEFLQPGIQLQQN  
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>gi\_555993218\_ref\_XP\_005908374.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Bos\_mutus  
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QKIRTVFSQTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKCKKWQKNNWPRNRNGMPQGP  
AMAIEYPGFY  
SYHQGCLVNSPGNLPMLGNQTWNNPTWSNQSWSNSQSWNSHWSWNSQAWCPQAWNNQPWNNQFN  
NYMEEFLQPGIQLQQ  
NSPVCLEATLGTAGENYNVIQQTVKYFNSQQQITDLFPNYPLNIQPEDL

>gi\_70778752\_ref\_NP\_001020515.1\_\_homeobox\_protein\_NANOG\_Bos\_taurus (Used in Figure 1C, mammal NANOG  
group)

MSVGPACQSLGPEASNSRESSPMPEESYVSLQTSSADTLDTVSPSPSSMDLLIQSPDSSTSPRVKPLSPSVEESTEKEETVPVKKQ  
KIRTVFSQTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKCKKWQKNNWPRNSNGMPQGP  
AMAIEYPGFYS



MSSAETLNTETVSPLPSNMDLLIQNSPDSSTSPNIIPTFVENSTVKKEEKVQIKKQKIRTVFSQTQLCVLNERFQRQKYLSQLQMQELSN  
ILNLSYKQIKTWQFNQRMKCKRWQKYNWPKNSNCAMRKGSAETTEYPLSSCHQGCLVNASGNLSMWSNQTCNSPTWSYHSWNS  
QWCPQAWNNQAWNNQLYSCGEEALQPQIQFQQNRPVSDLEATLEMAGESYDVIQIQPKYCSVQQTMDLFPNYFMNVQPEDV  
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KKQKIRTVFSQTQLCVLNERFQRQKYLSQLQMQELSTILNLSYKQIKTWQFNQRMKCKRWQKYNWPKNSNRMPQMSSATTEYLGLS  
SCHQGCLVNASGNLSVWSNQTCGNLPWSNHSWNSPSWNYHSWNSQTWCPQAWNNQAWNNQFYSYGEESLQPQIQFQQNPV  
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>gi\_641700941\_ref\_XP\_008139043.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Eptesicus\_fuscus  
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AQVKKQKIRTVFSQTQLCVLNERFQRQKYLSQLQMQELSSILNLSYKQIKTWQFNQRMKCKRWQKYNWPKNSHRMTQMSSATTEY  
LGLSSCHQGCLVNTSGNLSIWSNPSWTSWNYPAWNGQTWCPQAWNNQAWNNQAWNNQFCSYGEESLQPQIQFQQNPVSD  
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davidii  
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ATTDYLGSSCHQGCLVNTSGNLSICSNHSWTSWNYPAWNGQTWCPQAWNNQAWNNQAWNNQLLSYGEALQPQIQFQQN  
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>gi\_946754953\_ref\_XP\_014392335.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_homeobox\_protein\_NANOG\_Myotis\_  
brandtii  
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TGK EEKAQVKKQKIRTVFSQTQLCVLNERFQRQKYLSQLQMQELSSILNLSYKQIKTWQFNQRMKCKRWQKYNWPKNSHRVTQMSSAT  
TDYLGSSCHQGCLVNASGNLSMWSNHSWTSWNYPAWNGQIWCQAWNNQAWNNQAWNNQFLSYGEEALQPQIQFQQN  
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ucifugus (Used in Figure 1C, mammal NANOG group)  
MSVDSAYPQSLPCSESSNSREPSVPEIYEPEENYASLQMSSAETLHTEAVSPLPSSMDQLIQNSPDSSTSPSPSSPSATPPTSVENG  
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TDYLGSSCHQGCLVNASGNLSMWSNHSWTSWNYPAWNGQTWCPQAWNNQAWNNQAWNNQFLSYGEEALQPQIQFQQN  
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marmota  
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SKIQVKKQKMRTVFSQTQLCILNDRFQKQKYLSQLQMQELSSNLNLSYKQVKTWFQFNQRMKCKRWQKNNWPKNSNSVTQGSPLPT  
EYSGPYSNYNQGYQVNSPGNLPPWSNQTWNNPTWSNQTWNSQSWSSQSWNSQSWNSHWSNTQTWYTSWNNQAWNNNSF  
YNYGEESLQPSMQFQQNFPASDLETTLAFTGESHRFYFSTPQSMDFLNYSLNRQSEN  
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IQVKKQKIRTVFSQTQLCILNDRFQKQKYLSQLQMQELSSNLNLSYKQVFTYIENEFISRHSGLYSQGSPLTEYSGPYSNYNQGYQV  
NSPGNLPPWSNQTWNNPTWSNQTWNSQSWSSQSWNSQSWNSNWSNTQTWYTSWNNQAWNNQAWNNQWNNNSFYNYGEESLQPS  
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hinensis  
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QKSRVFSATQLCVLNARFQRQKYLSQLQMQELSDILNLSYKQVKTWFQFNQRMKCKRWQKKNWPKNCSAVTQKGPAPAEYPGIYA  
AYHQGCPVNPSPGNFPAGTPQSWTTQAWSPQSWSTQSWNSQTWCSPA WDAQFYNCGEESLQSSMQFQQVLPAGDLEAILE  
TSGEGQNVLQXTTKYLSTAQTMDFMLNYSMSMLPEDA  
>gi\_291392835\_ref\_XP\_002712808.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Oryctolagus\_cuniculus (Used in  
Figure 1C, mammal NANOG group)  
MSVDPACPASLPASEALDDQDSSLMPVPEPEEGKHPTLQLPCAQVPLTDTASPLPSSMDLPTQESDPSSTSPSPRVVKT PDSA  
EKSTK EEKVKKQKIRTVFSQTQLCVLNDRFQRQKYLSQLQMQELSSLLNLSYKQVKTWFQFNQRMKCKRWQRNNWPNICNSVTQKGS  
GPAE YPGFYPAYHQGCLVNTPGSLPMWNNQTWNNQTWNNPAWNSQSWNSHWSQAWYSQAWNNQAWNSPFLNCGDEVLQSS  
MQLQQNCPVSDLESILETVGESQNTAQQTTKHFSASQALDLLNYSVNMQPEN  
>gi\_488527008\_ref\_XP\_004455326.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Dasyopus\_novemcinct  
us (Used in Figure 1C, mammal NANOG group)

MSVDLASPQSLSCPKSDSRESSPMPEIYKAEENYASLQISSAEVPOQSETVSPLPSPMDLLIQDSPDSSTSPKMKLPAAGENSTAEKEDEV  
PVKKQKSRVFSQAQLCILNDRFQRQKYLSQLQMQELSHVLNLSYKQVKTWFQNRMKCKRWQKNVSWSKSSNSMTQKGLAPTE  
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KYLSQLQMQELSNILNLSYKQVKTWFQNRMKSKRWQKNNWSKNVNSLTQFQTASAPTEYPGLYSSYHQACLMNTSGNLPVWSN  
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>gi\_395847517\_ref\_XP\_003796416.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Otolemur\_garnettii  
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GKVQVKKQKTRTVFSTTQLCILNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRMKSKRWQKNNWLKNTNSMTQKASAP  
MEYPSFYSSYHQACLMNTSGNLPVWSNQTWNNPTWGNQTWSSQSWNSHSWNSQTWCTQAWNSQAWNNPFFNCGEEPLQPC  
LQFQQNFLASDLEIALEAAGESHNVIHQTTKYFSSPQTADSFLNYSMMNQPEDV

>gi\_826275194\_ref\_XP\_012493250.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Propithecus\_coquereli  
MNMTASPLPSSVDLLIQDSPDSSTSPKVKLPTSAQNSAVKKEDKAQGGKQKSRVFSSTTQLCILNDRFQRQKYLSQLQMQELSNILNLS  
YKQVKTWFQNRMKSKRWQKNNWSKNFNSLTQKASAPTEYPGLCPSYHQACLMNTSGNLPAWSNQTWSNPANWNNQTNWNSQ  
PWSNHSWNSQTWCTPAWNNQAWNNPFLNCGEETLQSCQLFQQNFLASDLEVALEAAGESLNVIQATKYFSSPQAVESFLNYSM  
DMQPEDL

>gi\_667308314\_ref\_XP\_008583676.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Galeopterus\_variegat  
us  
MNVDPQPCQSQPCPEASDRDSSPTVICGPEEKYPPLQMSSAEMPHAETVSPLPSSTDVLIQDSPDSSTSPKVKLPASAEKSTVKKEEK  
VKKQKTRTVFSPTQLCVLNDRFQRQKYLSQLQMQELSSVLNLSYKQVKTWFQNRMKCKRWQKTNWPKNSNSAAQKGSAPTEYPS  
LYSSYHQGCLVNTSGNFPLWSNQPWNNPAWSNQTWNSQSWNSHSWNSQTWCTQAWNNQAWNNPFFHNCGEECLQPCTQFQ  
QNYASDVESTMQTAGESHVVIQTTKYFSNTQTMDLFLNYMMNQPEDV

>gi\_685570933\_ref\_XP\_009178399.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Papio\_anubis  
MSVDPACQSLPCLASDCKESSMMPVICGPEENYPSLQMAEMPHETGKKDIYPFERLPLFRAPCKTEEIVNFAVLEPVHLFCDRCR  
TVFSSAQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRMKSKRWQKNNWPKNNGVTQKASAPTYPSLYSSCHQG  
CLVNPTGNLPTWSNQTWNNSSWSNQTQNIQSWSHSWNAQTWCTQSWNNQAWNSPFSNCGEESLQSCQLFQPNPASPDLA  
ALEAAGEGLNVIQQTTRYLSTPQTMDLLNYSTNMQPEDV

>gi\_817319050\_ref\_XP\_012330222.1\_\_PREDICTED\_homeobox\_protein\_NANOG,\_partial\_Aotus\_nancymaae  
MSMDPVCSQSLPCSEASDRGESSPTVICGPEENYPTLQMCSAEMPHETVSPLPSSMDLLIQDSPDSSTSPKGGKQPIAAESSAAKED  
KVPVKRQKTRTVFSSAQLCVLNDRFQRQKYLSQLQMQELSSILNLSYKQVKTWFQNRMKSKRWQKNNWPRNTSDATQKASAPTY  
PSLYSSYHQGCLVNTTGNFPVWNNQTNWNSQTRNIQSWNSHSWNTQTWCTQSWNTQAWNSPFFYNCGEEPLQSCMQFQ  
PNPASPDLALETAGE

>gi\_296211302\_ref\_XP\_002752348.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Callithrix\_jacchus  
MSMDPVCSQSLPCSEASDCGESSPTVICPEENYPSLQMCSAEMPHETVSPLPSSMDLLTQDSPDSSTSPKGRPTAAESSPAVKE  
DKVPVKKQKTRTVFSSTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRMKSKRWQKNNWPRNTSDVTQKASAPT  
YPSLYSSYHQGCLVNTAGNLPVWNNQTNWNSQTRNIQSWNSHSWNTQTWCTQSWNTQAWSSPFFYNCGEEPLQSCMQF  
QPNPASPDLALETAGENHNVIQQTTRYLNTSQTMDLFLNYSTNMPPEDV

>gi\_795569677\_ref\_XP\_011909856.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_homeobox\_protein\_NANOG\_Cercoce  
bus\_atys  
MSVNPACPXNLPCSEASDCKDWSPPPAVCGSEENHPSLQMAEMPHETVSPLPSSDILLIQDSPDSSTSPKGGKQPTAAENSATKKE  
XVKKQTRTLFSSAQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRMKSKRWQKNNWPKNNGVTQKASAPTPSL  
YSSCHQGRVNPAGNLPVWNNQTNWNSQTRNIQSWNSHSWNAQTWCTQSWNNQAWNSPFSNCGEESLQSCQLFQPNP  
PASPDLALETAGEGLNVIQQTTRYLSTPQTMDLFLXNMQPEVV

>gi\_297691032\_ref\_XP\_002822902.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Pongo\_abelii  
MSVDPACQSLPCFEASDCKESSMMPVICGPEENHPSLQMAEMPHETVSPLPSSMDLLIQDSPDSSTSPKGGKQPTAAENSATKKE  
DKVPVKKQKTRTVFSSTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRMKSKRWQKNNWPKNNGVTQKASAP  
TYPSSLYSSYHQGCLVNTGNLPMWSNQTWNSSSWSNQTQNIQSWNSHSWNTQTWCTQSWNNQAWNSPFFYNCGEESSLQSCMQ  
FQPNPASPDLALETAGEGLNVIQQTARYFSTPQTMDLFLNYSTNMQPEDM

>gi\_332249388\_ref\_XP\_003273845.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Nomascus\_leucogeny  
s  
MSVDPACQSLPCFEASDCKESSMMPVICGPEENYPSLQMAEMPHETVSPLPSSMDLLIQDSPDSSTSPKGGKQPTAAENSATKKE  
DKVPVKKQKTRTVFSSTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRMKSKRWQKNNWLKNSNGVTQKASAP  
TYPSSLYSSYHQGCLVNTGNLPMWSNQTWNSSTWSNQTQNIQSWNSHSWNTQTWCTQSWNNQAWNSPFFYNCGEESSLQSCM  
QFQPNPASPDLALETAGEGLHVIQQTARYFSTPQTMDLFLNYSTNMQPEDV

>gi\_115392123\_ref\_NP\_001065295.1\_\_homeobox\_protein\_NANOG\_Pan\_troglodytes (Used in Figure 1C, mammal NANOG group)  
MSVDPACQSLPCFEASDCKESSMPVICGPEENYPQLMSSAEMPHTETVSPLSSMDLLIQDSDSSTSPKGGKQPTSAENSVTKKED  
KVPVKKQKTRTVFSSTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQRMKSKRWQKNNWPKNNGVTQKASAPT  
YPSLYSSYHQGCLVNPTGNLPMWSNQTWNNSTWSNQTQNIQSWSNHWSNTQTWCTQSWNNQAWNSPFYNCGEESLQSCMQ  
FQPNPASDLEAALEAAGEGLNVIQQTARYFSTPQTMDFLNYSTNMQPEDM

>gi\_397481205\_ref\_XP\_003811843.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Pan\_paniscus  
MSVDPACQSLPCFEASDCKESSMPVICGPEENYPQLMSSAEMPHTETVSPLSSMDLLIQDSDSSTSPKGGKQPTSAENSVTKKED  
KVPVKKQKTRTVFSSTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQRMKSKRWQKNNWPKNNGVTQKASAPT  
YPSLYSSYHQGCLVNPTGNLPMWSNQTWNNSTWSNQTQNIQSWSNHWSNTQTWCTQSWNNQAWNSPFYNCGEESLQSCMQ  
FQPNPASDLEAALEAAGEGLNVIQQTARYFSTPQTMDFLNYSTNMQPEDV

>gi\_724942328\_ref\_XP\_010386322.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Rhinopithecus\_roxellana  
MSVDPACQSLPCLEASDGKESSMPVICGPEENYPQLMSSAEMPHTETVSPLSSMDLLIQDSDSSTSPKGGKQPAEAENSATKKED  
KVLVKKQKARTVFSSAQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVGLFWKNDNGVTQKASAPTYPSLYSSCHQGCLVNPTGN  
LPTWSNQTWNNSSWSNQTQNIQSWSNHWSNAQTWCTQSWNNQAWNSPFYNCGEESLQSCMQFQPNPASDLEAALEAAGEGL  
NVIQQTTRYLSTPQTMDFLNYSTNMQPEDV

>gi\_795107832\_ref\_XP\_011808042.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X1\_Colobus\_angolensis\_p  
alliatu  
MSVDPARQSLPCLEASDGKESSPTVICGPEENYPQLMSSAEMPHMETVSPLSSMDLLIQDSDSSTSPKGGKQPTAAENSATKKEE  
KVLVRKQKARTVFSSAQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQRMKSKRWQKNNWPKKNNGVTQKASAPTY  
PSLYSSCHQGCLVNPTGNLPTWSNQTWNNSSWSNQTQNIQSWSNHWSNAQTWCTQSWNNQAWNSPFYNCGEESLQSCMQFQ  
PNPASDLEAALEAAGEGLTVIQQTTRYLSTPQTVDFLNYSTNMQPEDV

>gi\_635063215\_ref\_XP\_007965674.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_isoform\_X2\_Chlorocebus\_sabaeus  
MSVDPACQSLPCLEASHGKESSMPVICGPGENYPQLMSSAEMPHTETVSPLSSMDLLIQDSDSSTSPKGGKQPTAAENSATKKE  
DKVPVKKQKARTVFSSAQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQRMKSKRWQKNNWPKNNGVTQASAPT  
YPSLYSSCHQGCLVNPTGNLPTWSNQTWNNSSWSNQTQNIQSWSNHWSNAQTWCTQSWNNQAWNSPFYNCGEESLQSCMQF  
QPNPASDLEAALEAAGEGLNIIQQTTRYLSTPQTMDFLNYSTNMQPEDV

>gi\_795229356\_ref\_XP\_011851453.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Mandrillus\_leucophaeus  
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DKVPVKKQKARTVFSSAQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQRMKSKRWQKNNWPKNNGVTQKASAP  
TYPYLYSSCHQGCLVNPTGNLPTWSNQTWNNSSWSNQTQNIQSWSNHWSNAQTWCTQSWNNQAWNSPFYNCGEESLQSCMQF  
QPNPASDLEAALEAAGEGLNVIQQTTRYCSTPQTMDFLNYSTNMQPEDV

>gi\_567316091\_ref\_NP\_001274577.1\_\_homeobox\_protein\_NANOG\_Macaca\_fascicularis  
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DKVPVKKQKARTVFSSAQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQRMKSKRWQKNNWPKNNGVTQKASAP  
TYPYLYSSCHQGCLVNPTGNLPMWSNQTWNNSSWSNQTQNIQSWSNHWSNAQTWCTQSWNNQAWNSPFYNCGEESLQSCMQ  
FQPNPASDLEAALEAAGEGLNVIQQTTRYLSTPQTVDFLNYSTNMQPEDV

>gi\_109095459\_ref\_XP\_001112791.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Macaca\_mulatta  
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DKVPVKKQKARTVFSSAQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQRMKSKRWQKNNWPKNNGVTQKASAP  
TYPYLYSSCHQGCLVNPTGNLPMWSNQTWNNSSWSNQTQNIQSWSNHWSNAQTWCTQSWNNQAWNSPFYNCGEESLQSCMQ  
FQPNPASDLEAALEAAGEGLNVIQQTTRYLSTPQTVDFLNYSTNMQPEDV

>gi\_795496091\_ref\_XP\_011709333.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Macaca\_nemestrina  
MSVDPACQSLPCLEASDSKESSMPVICGPEENYPQLMSSAEMPHTETVSPLSSMDLLIQDSDSSTSPKGGKQPTAAENSATKKE  
DKVPVKKQKARTVFSSAQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQSWNNQAWNSPFYNCGEESLQSCMQFQPNPASDLEA  
ALEAAGEGLNVIQQTTRYLSTPQTVDFLNYSTNMQPEDV

>gi\_513016540\_ref\_XP\_004869600.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Heterocephalus\_glaber  
MSAAAACAPGLSDSEADNGKAPRPPDAHSCPPPPAPVPPADAAASSLSSMDLLIQEPPDSDSSTSPICIALPGSQEEVSGKEEGKVP  
KKQKTPGSLKSEIIHTAEPGVPERVAVKTWQNRQRMKCKRWQKSNWPKNSSSIPQKGPAPAEYPGACSNYAQQYLNTSGNLPVW  
GNQTNWNNAGWSSPSWGSWNAQSWCPQAWSAPLPGFGEEALQPCLPFPQNFPSDLEAALEAVGDSYKYLSTPQSLDFLNYPT  
NPQPGDL

>gi\_612051977\_ref\_XP\_007503681.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Monodelphis\_domestica (Used in  
Figure 1C, mammal NANOG group)  
MSSCSHSQCCQSCRPKGDASRPYYTWSIASQPESLTSRYSNCHIQSPGKVPNTAISAPSSMDKCIQDTPDSATSPTSNSLSSQNK  
PKTHQGDQSPIKPKMRTVFSQAQLNVLNSRFVEQKYLSPQQIRNVAENLNLYKQVKTWFQNRQRMKSKRWQKDTMWTKNGN  
RNVQNGSALGEYISLYSPFHQDYMVSSSGTLPVWSNQTWNNQFQNSGEGSYHQHIFQHSYPASDLGATFGNNTGGAYSMSKQTS  
SFNTYPMEYLPYSYMNMLTHSKSEEDYDQRASDAQTQFLDPSVVPVFS

>gi\_1019018285\_ref\_XP\_016082410.1\_PREDICTED\_homeobox\_protein\_NANOG\_Ornithorhynchus\_anatinus (Used in Figure 1C, mammal NANOG group)

MIIITMKQPSEPGSSMSAQLALPSYQPCPPDVAHAGPYFPEGGWAPQPEAYPAAPPFLPFQMPGAEKGRDPPELSPASSCSEKVSQ  
STPDSATSPSAHPSSPQAWPGSQAEEDQTKGQMKKSKIRTAFTQTQLNLTNRRFQTQKYLSPQQIRDLAMSLNLTQKQVKTWFQNNQ  
RMKSKRDRKDNLTWTRRVSMVQNGSLPATYMSLYSALQHSYLVNPNATGNLPPWAGQAWASEPQGFVDGVDGQQQHPAEASQP  
FAKAMVGNYPQQAAALTFFSSPGAADCLPAFPTDLPLAHIKAEDSYSDPTFLAAHSQFPDTSGLHLYQP

>gi\_148357118\_ref\_NP\_001091862.1\_\_nanog\_homeobox\_Danio\_rerio (Used in Figure 1C)

MADWKMPVSYNFNPSYHAYAYGLMYPQVSEHGVPNLSWPDAAAYTHSGGVTAGYFTAQTAQSPWPSPENGGASSTYSQYPGHSQ  
NGRFLFSYNKTEPDQKAKDAEQTSSDTPSDSEAHPTDSWSSASSREGVPLTNLNLPSWRDRDYETDSGSPDSGERNLTSTAGEEVPNL  
NLGVDTQPPLALTASPVRPPTLPKTRAAFSEEQMNALVNRFNVRQRYLTPAEMKTLGATGLTYKQVKTWFQNRMMKLRHRQSDS  
SWMTERYVNAVPNTPASQSQFQSEPPGANQDHYINQVREPVKRSPPKTPFYPSYPQPRSPQTATSRPPGTWPLPPAVTHYEFNP  
PISYMPARDGSNAVNKESSPPLATSPTAGLWATKGITLL

>gi\_238054048\_ref\_NP\_001153902.1\_\_Nanog\_protein\_Oryzias\_latipes (Used in Figure 1C)

MAEWKTQVNYNPTFHAYTYGFVYQTGPEQNHVTGNDWSQNCEQNGYNGGPTQSHFPARSREESPPRSPEQQPESGHYYQDSGV  
VYIREAQTGRMLMAGQHRVGLDSGENCTRRTGSDSASDSEAHPTDSWSSCSNYDRSVPQTDPPVWVKNEEQTGARSPDHSEDEVSS  
SLMVESQSFAVQDGDASSSTHAPFTTTKKQASSTPNAPKAKVRAAFSESQMSTLVQRFSVQRYLAPAEMKNLADVTGLTYKQVKT  
WFQNRMMKLRHRHQKDTSWVSERYTINKDNTAADTVFSNVAPHVPPYQGDGMSHLRHHYNQHMMGAAFKNTPHNLAFYLAAMG  
NPPGTAGYPPWSSPPQAAVPSRPQVPGWPLPPGRSQFGFCPIPYDPSDAASLNNFERNAIPDSKDGESAGGANAAIHLNAVQ

>gi\_852770487\_ref\_XP\_012879028.1\_PREDICTED\_homeobox\_protein\_NANOG\_Dipodomys\_ordii

MSVDCVCAPNVRPEAADGEDGSPGPGSCQAREEEPRPSPEPTLHADTASPPPASVALRTQESRGSVSPLPARPATPDSRPGSVPGG  
QGDQKPPAKRQKIRTVFTQMQLYLLNERFQKQKYLSQLQMQELSTLLNLTQKQVKTWFQNRMMKCKRWQKSRGLLDGGQPAQV  
SGLHPGHAPGWAGAPAAAGGLPPWSDQMCCSSQSWSGPAPGAHPWDPQPWNSTGPAWSHAFFSHPPQQAQPCPLSQPDLPG  
ASLEASMEISGGSHPYLDAPLGSDCYVNYAAGVL

>gi\_637264368\_ref\_XP\_003216891.2\_PREDICTED\_homeobox\_protein\_NANOG\_Anlis\_carolinensis Used in Figure 1C, NANOG 1 group)

MGLKAPATLDVLSFFPPWARGGCDGPGCEWHPGSRGSLLEGPRPSSALPPAPGSPREAPSLRGAPPPEADSGIKGPQGPSPPSGMGF  
DDYYVYPSGQRDAAAHYPEGFPARESLGGGEEEEKEPRSQPDDSPQSYSSGTHFTYTPDSATSPNGPPSPQSTSQKLNGENNKGKKV  
KTRAAFSQKQLQILHHRFQNKYLSPQQIRELAAALDLYKQIKTWFNQRMKFKRTQKESLWLRKGMCPPQNGFLQMNPNYHQG  
YGVGESRNIHALAGLHENFTSNQFYANNQNYTSDHQIYGNPQNLPIANSEDGSFFGKATGASFNQAVAYNGQQAVGYISQQKIN  
FFHGFPNMEYATVKTEDGYPPNMTTEAGSFPSSSGFIYQLPLQTQGAQSNQ

>gi\_564257398\_ref\_XP\_006267653.1\_PREDICTED\_homeobox\_protein\_NANOG\_Alligator\_mississippiensis

MSTHLAVPAAPRYGGYYWDCPPEPAAQPEQDAAAPAPAPFPDQHPDLSPASSSSGMFIQYAPDSATSPNAEPLSPHLNPQR  
SGAGGEGGVKKAKTRTAFSPEQLQILHQRFSQKYLSPYQIRELGSALGLTYKQVKTWFQNRMKYKRYQKESQWIEKGTCLPQNGF  
YQAGYLDVGSYYQGCSVSANRNIQTVANVHQTYNSSPAYSSSQSLYTFMAIEDEGTFFGKAASPCNTQQAVGFLSPQKVNIFYHGFP  
TNVDYASVELEESYSFQNTPTGTPVSPGSGVRQPYQPVWHPQGTQSNYNS

>gi\_557319049\_ref\_XP\_006032699.1\_PREDICTED\_homeobox\_protein\_NANOG\_Alligator\_sinensis

MPYSLSHLLSVGSAISVLRNSTDIYVVKCCPELWVGYGDNCYLFCKERKDWNSQESCAAESPPGDQRHPGNDLSPASSSSGMFIQY  
TPDSATSPNAEPLSPHLNPQRSGAGGEGGVKKAKTRTAFSPEQLQILHQRFSQKYLSPYQIRELGSALGLTYKQVKTWFQNRMKYK  
RYQKESQWIEKGTCLPQNGFYQAGYLDVGSYYQGCSVSANRNIQTVANVHQAYNSSPAYSSSQSLYTFMAIEDEGTFFGKAASPCN  
TQQAVGFLSPQKVNIFYHGFPNVDYASVELEESYSFQNTPTGTPVSPGSGVRQPYQPVWHPQGTQSNYNS

>gi\_558147891\_ref\_XP\_006119990.1\_PREDICTED\_homeobox\_protein\_NANOG\_Pelodiscus\_sinensis Used in Figure 1C, NANOG 1 group)

MSAHLAMPAYQAYPAGVGTGIKYGDYYWNCPGEMDSAPHKEAADADVAVPEPEEKPLNPPELSPASSSSGTLRYTPDSATSPNAA  
PPSPHPAIRMGGGGSGGGVKKAKTRTAFSPEQLQTLHQRFSQKYLSPQQIRELGSALGLTYKQVKTWFQNRMKFKRCQKETQW  
MEKGTCLSQSGFHQAGYLDMPNPSYHQGCPVSASRNQTVTNVHQSYSSNTYSGSQSLYPFMAIEEFGFKPGGACSAQQTMGFF  
SQQKVNLYHGYPANMDYASRETEDGYHFQNASVNAMSFPGSAGRQYQPAWYPQGTQSNFNS

>ENSFALT0000007600\_peptide:ENSFALP0000007568\_pep:KNOWN\_protein\_coding\_NANOG\_Ficedula\_albicollis  
Used in Figure 1C, NANOG 1 group)

MSAHLATPPYAPYGAARYGDCYWLSAGSTDSAPAEAAAGLDALPLPAAPPPPPPLDSPASSSSGTLTQYHTPDSATSPNAA  
SAQKVKAAQKGGVKSRTAFSPEQLRALHQRFSQKYLSPQQIRELAAALELTYKQVKTWFQNRMKFKRCQKESQWVDKGMYL  
PQNAAHQAAYLDMAPAFHQVFPVGGTTRSFQAVHNHQAAYSSGQSYGNGQNLVSFVSVEDVESVGLFGKGGTSCNTQQTVGLLS  
QQMNFYRSCFDNVDYVSVEVEDTFNFQNTSDNVTPIYSSSPIENQCQLPWHMPMGNQSGYESQV

>gi\_449485131\_ref\_XP\_002190766.2\_PREDICTED\_homeobox\_protein\_NANOG\_Taeniopygia\_guttata Used in Figure 1C, NANOG 1 group)

MLGAGGPGPAMSSHLGTPPYVLYPGAAYKYGDYYWFSAGSMDSAPTEEAPAPDALPLPAAKTPSPSVDSPASSSSGTLTQYHTPDSAT  
SPTAAGSPSPYSSLQKVKAAQKGGVVKTKSRTAFSPEQLKALHQRFSQKYLSPQQIRELAAALELTYKQVKTWFQNRMKFKRCQK

ESQWMDKGMYPQNGVDQAAYLDMAPAFHQVFPAGSGRNFQAVSNVHQAYSSGQTYGNGQNLYSFSSVEDEGLFGKGGTSCNT  
QQTMGLLSQMNFYHSYFDNIDYVSVEVDDTFNFQSTSDTVTPFSSSPIQNQCQLPWHMPGTQSGYESQV  
>gi\_930241053\_ref\_XP\_014165108.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Geospiza\_fortis  
MNSLRQSQELVMVSYRKKHKRIDSPASSSGTLTQYHTPDSATSPTAAGSPSPHSSLQKVKAAQKGVVKTGKSRTAFSQEQLKALHQR  
FQSQKYLSPQQIRELAAALQLTYKQVKTWFQNRQMKFKRCQKESQWMDKGMYPQNGVHQAAYLDIAPTFHQVFPAGSSRNFA  
VSNVHQAYSSGQTYGNGQNLYSFSSVEDEGLFGKGGTSCNTQQTMGLLSQMNFYHSCFDNIDYVSVEVEDTFNFQSSSDTVTPFSS  
SPIQNQCQLPWHMPGTQSGYESQV  
>gi\_1003728051\_ref\_XP\_015727430.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Coturnix\_japonica  
MSAHLAMPSYGSVRCGHYYWSPSSMDSASTEAPATDHSTAEQKTPCHPDASPASSSGTLIQTYPDSATSPTGDHPSQHPTYQKV  
KDKGDSGARKGKSRTAFSQEQLQTLHQRFSQKYLSPHQIRELAAVLGLTYKQVKTWFQNRQMKFKRCQKESQWVDKGIYLPQSGF  
HQAAYLDMTPTFYQGFVPGASRNLAQVTTAHQAYSSGQTYGNGPGLYQIVAMEDDEFFGKGGTSCNTQQAMGLLSQMNFYHG  
YSTSDYDSLQAEDTYSFQASDSITQFSSSPVRHQYQGPWHTLGTQSGYET  
>gi\_225784819\_ref\_NP\_001139614.1\_homeobox\_protein\_NANOG\_Gallus\_gallus (Used in Figure 1C, NANOG 1  
group)  
MSAHLAMPSYGSVRCGHYYWSPGSMDSASAAEAPAADLSLTTEQKTPCHPDASPASSSGTLIQTYPDSATSPTADHPSHRPTFQK  
VKDKGESGTRKAKSRTAFSQEQLQTLHQRFSQKYLSPHQIRELAAALGLTYKQVKTWFQNRQMKFKRCQKESQWVDKGIYLPQNG  
FHQAAYLDMTPTFHQGFVAVANRNLAQVTTSAHQAYSSGQTYGNGQGLYPMFMAVEDEGFFGKGGTSCNTQQAMGLLSQMNFYH  
GYSTNVDYDSLQAEDTYSFQSTSDSITQFSSSPVRHQYQAPWHTLGTQNGYET  
>gi\_1121864621\_ref\_XP\_003202657.2\_\_PREDICTED\_homeobox\_protein\_NANOG\_Meleagris\_gallopavo (Used in  
Figure 1C, NANOG 1 group)  
MSAHLAMPSYGAVERCGHYCWSPGSMDSASAAEAPAADLSLTAQKTPSHPDASPASSSGTLIQTYPDSATSPTADHPSHHPTFQK  
IKDKGESGARKAKSRTAFSQEQLQTLHQRFSQKYLSPHQIRELAAALGLTYKQVKTWFQNRQMKFKRCQKESQWVDKGIYLPQNGF  
HQAAYLDMTPTFHQGFVAVANRNLAQVTTSAHQAYSSGQTYGNGQGLYPMFMAVEDEGFFGKGGTSCNTQQAMGLLSQMNFYH  
GYSTNVDYDSLQAEDAYSFQSTSDSITQFSSSPIRHQYQAPWHTLGTQSGYET  
>gi\_874453809\_ref\_XP\_012948354.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Anas\_platyrhynchos (Used in  
Figure 1C, NANOG 2 group)  
MDRPADGCSPHYIWKYHSLYFFPLSFQQRTPSHPDASPASSSGTLVQYTPDSATSPTAERPSPHPSFQVKEKDEGAACKGKSRTAFS  
EEQLQTLHQRFAQKYLSPHQIRELAASLGLTYKQVKTWFQNRQMKFKRCQKESQWVEKGMYSQNGFHQASYLDMTPTFHQGF  
AGANRNLAQVTNMHQAYSSGQTYGNGQCLYPMFMAVEDEGFFGKGGTSCNSQQAVGLLTQQMNFYHGYPSTSDYDGLQSEDTYSF  
QSTSDGIMQFSSSPVRHQYQAPWHTLETQSGYES  
>gi\_699644435\_ref\_XP\_009894969.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Picoides\_pubescens  
MSTHLAMPPYMPYGAFCGDIYWLSPGSTESEPAEAPPADTVPCAPEKTPSQPDVSPASSSGMLTQYTPDSATSPTAERPSP  
HPSSQVKKEEGEVVKKTKSRTAFSQEQLQILHQRFSQKYLSPQQIRELAAVLGLTYKQVKTWFQNRQMKFKRCQKESQWVEKGV  
YLPQQGFHQAAYLDITSNYHQGFVAVANRNLAQVTTNVHQAYSSGQTYGNGQNLYSFMAVEDEGLFGKGGTSCNTQQAMGLLTQ  
QMNYHGYADMDYVLEPEDTYGFQNTSDNIAPFSGSPVHQYQAPWHPLGTQSGYES  
>gi\_541990976\_ref\_XP\_005446141.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Falco\_cherrug  
MLQPDVSPSSSGTLTHYTPDSATSPTAERPSPHAPLQKAKEEGEGMMKAKSRTAFSQGLQILHQRWFQTQKYLSPQQIRELAAAL  
GLTYKQVKTWFQNRQMKFKRCQKQETQWMEKGMYPQNGFHQAAYLDITPTFHQGFVAVANRNLAQVTTNVHQAYSSGQTYGNG  
QSLYFMAVEDEGLFGKGGTSCNTQQAMGLLSQMNFYHGYPADVDYVLESEDYTFPSTSDSGTPFSGSPVWHQYQAPWHPLG  
TQGGYES  
>gi\_529429355\_ref\_XP\_005234494.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Falco\_peregrinus  
MSAHLAVQPYLPYDAVYMYGDIYFWFSPGSMDCVPAEAAAADPLPFLAAEKTSPHPDVSPSSSGTLTHYTPDSATSPTAERPSPH  
APLQKAKEEGEGMMKAKSRTAFSQGLQILHQRWFQTQKYLSPQQIRELAAALGLTYKQVKTWFQNRQMKFKRCQKQETQWMEKG  
MYLPQNGFHQAAYLDITPTFHQGFVAVANRNLAQVTTNVHQAYSSGQTYGNGQSLYFMAVEDEGLFGKGGTSCNTQQAMGLLSQ  
QMNFYHGYPADVDYVLESEDYTFPSTSDSGTPFSGSPVWHQYQAPWHPLGTQGGYES  
>gi\_543737791\_ref\_XP\_005509821.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Columba\_livia  
MNAHLAMPPYLPYGAVERGYDYYWLSPGSMDSMPAEAPPADALPFAVEKTPSHPDASPASSSGTLIQTYPDSATSPTTDRPSPH  
SSQVKKEEGEVVKKAKSRTAFSQEQLQILHQRFSQKYLSPQQIRELAAALGLTYKQVKTWFQNRQMKFKRCQKESQWVEKGVYLP  
QNGFHQAAYLDIAPTFHQGFVAVANRNLAQVTTNVHQAYSSGQTYGNGQSLYFMAVEDEGLFGKGGTSCNTQQAMGLLSQMNF  
FYHGYTADMDYVNLQSEDYTFQSTSDSVTQFSSSPVRHQYQAPWHPLGTQSGYES  
>gi\_701426577\_ref\_XP\_010002458.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Chaetura\_pelagica  
MGKEFQDNMGDLTVAFYQLEGPTRKMRDCLQGHVVTQQHHTETLVQFPYMDTETEEIKTTDDALLLGLVGLTEQQSETAATRV  
CGQSPYTGNEQRNEAARSLRPLQGGHGNKQAMCFMWSPLASYTFQAGDVSPASSSGTLIQTYPDSATSPTAERPSPHPSQKA  
KEEGEVVKKAKSRTAFSQEQLQVLHQRFNQKYLSPQQIREMAAALGLTYKQVKTWFQNRQMKFKRCQKESQWVEKGVYLPQN  
GFHQAAYLDITPTFHQGFVAVANRNLAQVTTNVHQAYSSGQTYGNGQSLYFVAVEDEGLFGKGGTSCNTQQAMGLLSQMNFYH  
GYPADMDYVLESEDYTFQSTSSSMTLSSSPVRHQYQAPWHPLGTQSGYES  
>gi\_696985274\_ref\_XP\_009560768.1\_\_PREDICTED\_homeobox\_protein\_NANOG\_Cuculus\_canorus

MFNSAAGDSPASSSSGTLIQYTPDSATSPTAERPSPHPSFQKVKQEGEGVVKAKSRTAFSQEQLQMLHQRFSQKYLSPQQIRELAA  
ALGLTYKQVKTWFQNRMKFKRCQKESQWVEKGVYLPQNGFHQAAYLDIPPTFHQGFVPGASRNQLHVMTNMHQAYSSSQTYG  
NGQSLYSFMAVEDEGFFGKGGTSCNTQQAMGLLSQQMNFYHSCPANMDYVSLESEDYGFQSTSDSIAPFTSSPVRHQYQAPWHS  
LGTQSGYES

>gi\_558147891\_ref\_XP\_006119990.1\_PREDICTED\_homeobox\_protein\_NANOG\_Pelodiscus\_sinensis Used in Figure  
1C, NANOG 2 group)

MSAHLAMPLYQPYPSGTGMSYGEFYWNSAGGTERAASWPGRGAVAAGDAQFPEEERQASSSSGNFSHFTPDSATSPQTESSPPQP  
ASKLQKDGKEGEKGVKKAKSRTAFSKEQLKTLHQRFSQKYLSTQEMLELATALGLTYKQVKTWFQNRMMKLKTYEKHNLWSERAQY  
LMQTGFQPSYEVHPKFHQNYPISLAGTIQDVVNPHQNYSSGQNPYAFIASEEGGVFGKGGATCSVQQTGVGFIAQRKVDYFHGFSG  
TMEYTGAKTGDGYSFHASATVAPFPGTAGHHLYLPEAELMQMAQSNCH

>gi\_733871376\_ref\_XP\_010715694.1\_LOW\_QUALITY\_PROTEIN\_homeobox\_protein\_NANOG\_Meleagris\_gallopavo  
Used in Figure 1C, NANOG 2 group)

MGGYTYNSGYTYGLGDEMLKSRPLERNLEILVNDVSSASSSSGNFSQFISDLAISQHSASSSRQPTTKLQNGREYDMGTVKKAKSRTAF  
SXEQQQTLHQHLQSQKYFSPHQIQELAAALGLTYHQVKTCFQNRRLKRCQKNTLWTAWIQCVMQNSFHPSSYLDVYPKFHQVYV  
ISAASNIQIMPTPCQHYRAGQKAYIILTSEDGGVYFKGGSICSIQQTGVGFIAQHKGVFYYSYPGSVEYLCTKTSGGYNFHQSPMGASFP  
ATAGHHLYHS

>gi\_449485131\_ref\_XP\_002190766.2\_PREDICTED\_homeobox\_protein-Taeniopygia\_guttata Used in Figure 1C,  
NANOG 2 group)

MCAQLALPPCPAYPGGAARGCLELRWGAAGQAAPAPAAGLSPEAAGSRHTAEVSPASSSSGNFSQFTPDSATSPHSSSTSPQPTAKS  
QKGREYGVGIRKTKSRTAFSKEQLLTLHQRFSQKYLSPQQIRELAVALGLTYKQVKTWFQNRMMKLKRCQKQSLWSERAQCLTQS  
GFQSGTYLDVHPKFHQGYPIATAGNIQTVAPCQHYGAGQNAYTIVTSEDGGVFGKGSVQQTGVGFIAQHKGVDYHYSYPGSVEYPSGK  
TGDGCNFHHSATMGAPFPTAASHHLYHS

>ENSFALT0000007595\_peptide:ENSFALP0000007563\_pep:KNOWN\_protein\_coding\_Ficedula\_albicollis Used in  
Figure 1C, NANOG 2 group)

MYQACPGGAALGYLELHWGEPRPAPTAAGPAAIAAAGPCPEAAARRHTAEVSPASSSSGNFSQFTPDSATSPHSSSSSPQPTAKCQK  
GRECGVEGMRKTKSRTAFSKEQLQTLHQRFSQKYLSPQQIRELAVALGLTYKQVKTWFQNRMMKLKRCQKHSLWSERAQCLTQSG  
FQTSTYLDVHPKFHQGYPIAAGNIQTMPAPCQHYGAGQNAYTIVTSEDGGVFGKGGGTCSVQQTGVGFIAQHKGVDYHYSYPGSMEY  
PGSKTGDGCNFHHSATMGAPFPTTASHHLYHS

>gi\_698383276\_ref\_XP\_009810570.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_homeobox\_protein\_NANOG,\_partial\_  
Gavia\_stellata

MCAHLALPPYQAYPSGTGMGYLEFYWNSAGEAXGXXXXTNASQSPEAGGKRQTAEVSPASSSSGNFSQFTPDSATSPHSASSSPQPT  
AKSQKGREDMEGVRKAKSRTAFSKEQLQTLHQRFSQKYLSPQQIRELAAALGLTYKQVKTWFQNRMMKLKRCQKHSLWAERAQ  
CLTQ

>Unannotated\_Chromosome\_1:75359239\_75360897\_homeobox\_protein\_NANOG\_Gallus\_gallus (Used in Figure 1C, NANOG 2  
group)

MCAQLALPPYQAYPGGSGMGYLEFCWSSAGDTGHVPSVAGPAAAASASPSPEAGQHRQTTEISPASSSGNFSQFMPDSATSPHSA  
SSSPQPTAKPQKGREDDVMGTVKKGKSRATFSEEQLQTLHRRFQAQKYLSPHQIRELAVALGLTYQQVKTWFQNRMMKLKRCQKHIL  
WTARAQCLTQNSFQSTYLDMHPKFHQGYPIAASNIQTVSSPRQHYGAGQNAYATVTSSEDGGVFGKGGGTCSVQQTGVGFIAQHK  
VDYHSCPGSVEYPGTKTGDGCNFHHSAPMGASFPPTAGYHLYHS

>gi\_878283600\_ref\_NP\_001297341.1\_homeoboc\_protein\_NANOG\_Anas\_platyrhynchos (Used in Figure 1C, NANOG  
1 group)

MCAQLALPPYQAYPGGSGMGYLEFCWSSAGDTGHVPSVAGPAAAASASPSPEAGQHRQTTEISPASSSSGNFSQFMPDSATSPHSA  
SSSPQPTAKPQKGREDDVMGTVKKGKSRATFSEEQLQTLHQRFQAQKYLSPHQIRELAVALGLTYQQVKTWFQNRMMKLKRCQKHIL  
WTARAQCLTQNSFQSTYLDMHPKFHQGYPIAASNIQTVSSPRQHYGAGQNAYAIVTSEDGGVFGKGGGTCSVQQTGVGFIAQH  
KVDYHSCPGSVEYPGTKTGDGCNFHHSAPMGASFPPTAGYHLYHS

>sarcopus\_nanog\_\_Unannotated\_protein (Used in Figure 1C, mammal NANOG group)

GRGVWRPVPLPLPSPELVARAPASLPKWDADRAPRLSLLSPPAFAPAPQSLNALVQDPPGSLSGPTVQENKVDQSKGKKQKTRT  
TFTQEQLNLLRSDFALSRYITPQRGRQLAQLLGLSYKQVQVKTWFQNRRLKAKRPQAALASSPHDPLRPQVKRSPLALGFPALSGSRAP  
MGGPVLSGNPSPSFSWDRLLDHKASASPRHFPWTL

>gi\_395541126\_ref\_XP\_003772498.1\_PREDICTED\_NANOG\_homeobox\_protein\_Sarcophilus\_harrisii (Used in Figure  
1C, mammal NANOG group)

MTSCSLSQQCQSSQPEGDASCPYNTWISASQPEPFTASSPYSNFQIQSPEKLPSTAISSPATPTSVDMMFVQDIPDSATSPSTNNLSSQN  
KPKIHQKEDQNLVKKSKMRTVFSQAQLNVLNSRFLQKYLSPQQIRNVAENLNLYKQVKTWFQNRMMKSKRWQKDSMWSKNS  
NNMVQNGSTVGEYISFYSPFHQDYMVNPSGNLPMWSNQTWNNQFQNGGEGSYQHQVFQHSYPASDLGAPFGNTISEVYPMKP  
QMTMSFSAPHTMEYLPYSMNMQLTHKSEEDYDYQQVSDVVQTQFLDPSGVPIFQS

>gi\_620949491\_ref\_XP\_007661306.1\_PREDICTED\_NANOG\_neighbor\_homeobox\_like\_Ornithorhynchus\_anatinus  
(Used in Figure 1C, mammal NANOGNB group)

MAPLDQTHGSGSSSGLISIARNNDEGNEMEKKEEGKERNVAKRKMDRVVHKT SQNRPVSKSIMETLWMTFKMKHRVRTPEAVR  
LAGDLAISVPQVTAWFQSTRRKYREMATVQKKATKSVQVS  
>gi\_620967693\_ref\_XP\_007657462.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_like\_partial\_Ornithorhynchus\_ana  
tinus (Used in Figure 1C, mammal NANOGNB group)  
LQGHAAATVVHSLHEAPIWKAKSLQ SARFKERIYTRLLLPE SIVSRGASFRSFIQAFPKVSLVEMEMMSSVTFPLFEGDKEIDQLW NENY  
QTCRHPPRKNASQSAAPFCPLELLMAPPDQAHGVS PSSGLISIARNKDEGDGVEETEAE G KESNA AETNRMVVHKT SRNHPVSKSIM  
ETLWATFKVKHRVRTPEAVRLAGDLAISVLQVKA WFRSTRRKHRKMAKGQRRVTKSKMQSVLRMKSSVICYMCCA  
>gi\_830179254\_ref\_XP\_012587790.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Condylura\_cristata  
MPGEEAPEPSTRHR SKERSGTRSEQKEKNGQVEQY PQRTR LISKPLMNTLWTKFKLRKYL TIGDRLSLAFEFSLTDKQISQWFCEKREKY  
KEEIYKQYKKKHKLVKDALLTDKIKIKEQLAECENVFNEVQEEQVATSLKDESDCETKRKTRCLRAP TPIRDTEGSTSLSEEESELEK  
IEELEGRLKRVNPLAPGSTSPMTTAPPPYNPGWDPGTEKPIWVPERCTRPVEESSRQNEAPT VADPVADISNPSECCQVTPHALDPAD  
DIPSAQVR  
>gi\_1008791739\_ref\_XP\_015841837.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Peromyscus\_maniculatus\_baird  
ii  
MKQSLDMENVTTSER NLLKKLIAHHRQDPEHSSWSSSKGGRKKKTEERKKPEAKLKKRVKQKKQVPRPEKSVSKPLMDTLWARFK  
SRLLPTAKDCYLLSFQSLTDKQIFQWFW EKRRK YKEERKTGPAAEQKKQDPGDADPLC  
>gi\_852770483\_ref\_XP\_012879027.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Dipodomys\_ordin  
ium  
MVMVMVMVMVVLVLTVALAVAGLVMKMAEVSSRRRATSSGSANPQPSDTMELEGKGRERQKCRRCGKWKRQKEPKKTQKEED  
LTEIARKEEQEACSTKPRVSKSLETLWAKFKL TRTPSVRDYLVLSFEFNMTGAQIRQW FYEKRKQYSKEMYKHRRKKRQER  
>gi\_731480294\_ref\_XP\_010589223.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_NANOG\_neighbor\_homeobox\_Loxo  
donta\_africana (Used in Figure 1C, mammal NANOGNB group)  
MGKRILLHGKKTAMPY NQNPEQSTRNHSEDEKKGKEKWENEEGEEERKEEKRWEE TLYPKRLLSKSLMDNLWANFKXNKCP RER  
DYL SLSFQFNMTDKQIKWFSEKRK YK KDMFKGNITKDTRSDRNSEKHGWMPKETK PQRKGEFNHRRARQSGRVRQGPVSKPLLD  
VLWIHFKHNSNVNRQSQVLAKFLDLSPYQDSQL  
>gi\_640805862\_ref\_XP\_008059375.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_NANOG\_neighbor\_homeobox\_Tarsius  
syrichtha  
MSQVVRNNGYITSDVSYWILDHLVQELLHVSFTSHDYLSDLHIKAKQSNWNYREDEEKGEQKWRKEGRGGSRNEXEKERKEEKGKSK  
EPYPRRXLVKSFMDTLWAHFKLNKSP IIQDLSLSFELGMTHHQSIXFYKRRK YK KEMSKWKHNR  
>gi\_931580426\_ref\_XP\_014202566.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_NANOG\_neighbor\_homeobox\_Pan\_p  
aniscus  
MHRVRWLTPVIPALWEAEAGRSRGQEIETILANKPPWTALDCLSLFNIVMLDEDEQNGKQKWREEGGEAGRKREREKEXKNEKELQ  
DEQENKRKRENEKQKQYPEKRLVSKSLMDTLWAKFKLNRCPTIQESLSLSEFDMTHKQISQWFCRTRKKNKEMSKRKHKKKHTGW  
RSLCCQGWSRTPALK  
>gi\_821033309\_ref\_XP\_012357801.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_NANOG\_neighbor\_homeobox\_Nomas  
cus\_leucogenys  
MPVIPALWEAEAGRSRGQEIETILANMKQPAMPWDQNPEQSTGNYS EDEQNRKQKWREGGGEAGGKTEREKEDKNEKELQDEQE  
KRRKRENEKQKQYPEKRLVSKSLMDTLWAKFKLNRCPTIQESLSLSEFDMTHKQISQWFCRTRKKNKEMSKRKHKRKHMRWRSLC  
CQGWSRTPALK  
>gi\_686739556\_ref\_XP\_009245676.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Pongo\_abelii  
MPVIPAPWEAEAGRSRGQEIETILANKRQPAMPWDQNPEQSTGNYS EDEQNGKQKWREGGGEAGRKREREKKEKNEKELQDEQE  
NKRKRENEKQKQYPEKRLVSKSLMDTLWAKFKLNRCPTIQESLSLSEFDMTHKQISQWFCRTRKKNKEMSKRKHKEKHMRWRSLCCQ  
GWSRTPALK  
>gi\_1034100027\_ref\_XP\_001164884.3\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Pan\_troglodytes (Used in Figure  
1C, mammal NANOGNB group)  
MHRARWLTPVIPALWEVEAGRSRGQEIETILANKQPAMPWDQNPEQSTGNYS EDEQNGKQKWREGGGEAGRKREREKKEKNEK  
ELQDEQENKRKRENEKQKQYPEKRLVSKSLMDTLWAKFKLNRCPTIQESLSLSEFDMTHKQISQWFCRTRKKNKEMSKRKHKKKHT  
RWRSLCCQGWSRTPALK  
>gi\_74759191\_sp\_Q7Z5D8.1\_NANGN\_HUMAN\_RecName\_Full=NANOG\_neighbor\_homeobox;\_AltName\_Full=Home  
obox\_protein\_C14 (Used in Figure 1C, mammal NANOGNB group)  
MHRARWLTPVIPALWEAEAGRSRGQEIETILANKQSAMPWDQDPEQSTGNYS EDEQNGKQKWREEGEAGRKREREKKEKNEKEL  
QDEQENKRKRENEKQKQYPEKRLVSKSLMHTLWAKFKLNRCPTIQESLSLSEFDMTHKQISQWFCRTRKKNKEMSKRKHKKKHM  
RWRSLCCQGWSRTPALK  
>gi\_426371498\_ref\_XP\_004052683.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Gorilla\_gorilla\_gorilla  
MKQSAMPWDQDPEQSTGNYS EDEQNGKQKWREEGEAGRKREREKKEKNEKELQDEQENKRKRENEKQKQYPEKRLVSKSLMHT  
LWAKFKLNRCPTIQESLSLSEFDMTHKQISQWFCRTRKKNKEMSKRKHKKKHM RWRSLCCQGWSRTPALK  
>gi\_725592896\_ref\_XP\_010347133.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Saimiri\_boliviensis\_boliviensis

MLTPPASYQKAGTHYDSHQKPQETSRIFFGRARWLTPVIPALWEAEVGGSRGQEIETILVNRKQPAMPWDQNPEQSNNGYSEDEQK  
EKQKSREGGGEAGGKIEQEKEEEMEKDVDNEQEKKRTMENEKQKQYPKTRLVSKSLMDTLWAKFKLNRFPPTIQESLWLSFEFGMTYK  
QISQWFYKRRKKYNKEMSKKKRKKKHEKGLRCRGWS  
>gi\_966970433\_ref\_XP\_015006323.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_NANOG\_neighbor\_homeobox,\_partial  
\_Macaca\_mulatta  
WWLMPPIAPWEAKAGRSXGQEIKTILANKRPAMSDQNPEQSTENYSEDEQNGKQKWREGGREAGRKREREKEEENEKELEDEP  
ENKRKRENKHKQYPEKRLVSKSLMDTLWAKFKLSRCPTIQESLSLSEFDMTHKQISQWFCKRKKYNKEMSKRKHKKNIRDFIKYFDI  
EMAFIHMNRNHLTPT  
>gi\_544469178\_ref\_XP\_005596075.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_NANOG\_neighbor\_homeobox\_Macac  
a\_fascicularis  
MTRVLQKLQKLRNLDKNCRAQWLTPVIPALWEAGEAGRSQGQEIKTILANKRPAMSDQNPEQSTGNYSSEDEQNGKQKWREGGR  
EAGRKREREKEEENEKELEDEPENKRKRENKHKQYPEKRLVSKSLMDTLWAKFKLSRCPTIQESLSLSEFDMTHKQISQWFCKRKK  
YNKEMSKRKHKKNIRGKKVFLVK  
>gi\_724942376\_ref\_XP\_010386348.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox,\_partial\_Rhinopithecus\_roxellana  
RWLKPVIPALWEAEAGGSQGQEIETILANTKQPAMSWDQNPEQSTGNYSSEDEQNGKQKWREGGGEAGRKREREKEEENEKELEDE  
PENKRKRENEKQKQYPEKRLVSKSLMDTLWAKFKLNRCPPTIQESLSLSEFDMTHKQISQWFCKRKKYNKEMSKRKHKKKTYKVRKC  
FL  
>gi\_795150726\_ref\_XP\_011838477.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Mandrillus\_leucophaeus  
MKDSVLPQQWNSPLSLLSQGVYLGRAWLTPPIPLWEAEAGRSQGQEIETILANTKRPAMSYDQNPEQSTGNYSSEDEQNGKQK  
WREGGREAGRKREREKEEENEKELEDEPENKRKRENEKHKQYPEKRLVSKSLMDTLWAKFKLNRCPPTIQESLSLSEFDMTHKQISQW  
FCKRKKYNKEMSKRKHKKKHTR  
>gi\_685570929\_ref\_XP\_003905976.2\_\_PREDICTED\_NANOG\_neighbor\_homeobox,\_partial\_Papio\_anubis  
RWLKPVIPALWEAEAGGSRGQEIETILANMKRPAMSYDQNPEQSTGNYSSEDEQNGKQKWREGGREAGRKREREKEEENEKELEDEP  
ENKRKRENEKHKQYPEKRLVSKSLMDTLWAKFKLNRCPPTIQESLSLSEFDMTHKQISQWFCKRKKYNKEMSKRKHKKKHTR  
>gi\_826346799\_ref\_XP\_012518544.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox,\_partial\_Propithecus\_coquereli  
MDLNQQGLEDLVIQKQPAMAWDPGPEQSSRNYGKDEGKRKQEWREETGGGEKEEVEKELEEEQKKEKKKE  
>gi\_831236958\_ref\_XP\_012664751.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox,\_partial\_Otolemur\_garnettii  
RWLTPVIPAFWEAETGRQLETLVSRKKKVAMPWDQNPEQSHRNYSEHERKRKQKWREERGGQGTGKEKEEIEKELEEEQKKEEK  
KEKENEQHPKRLVSKPLMDTLWGKFKLNKYLTIQDSFSLSEFDMTHKQINQWFCKRKKYNKAMSEQKYNKSLRGKQNRTRLAY  
CKHQGRTPQLNATCLQL  
>gi\_829830075\_ref\_XP\_012633078.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_isoform\_X1\_Microcebus\_murinu  
s  
MLWDPSPEQSSKNCKEEEGTKKQKCREEETAGGGDKKEEVEKELEEEQKKEKENGEGCPRKRLVGSLSMDTLWGKFKLNKYLTIQDTL  
SLSFEFSMTNRQINQWFCRKRKTYNKEMSKRKYKRRKGSSTKYGVMTHTRGGLPLHRI  
>gi\_674105033\_ref\_XP\_008823724.1\_\_PREDICTED\_LOW\_QUALITY\_PROTEIN\_NANOG\_neighbor\_homeobox\_Nanno  
spalax\_galili  
MDKLIKKFANARITPVTGREREREDEIEEKRMMDTANTVKNKVGMMKSTSMKSELTKPETVRLILERSNKGEAPALLVKTIQDLKDRIGKRL  
ALNVESDTGKSAQHAEVIAAKLAVQSFDEKQKVCYIFTDSWCVANGIAIWEIHKLRWVWVRTPLIPAXWEAEAGNLVVPISQPD  
HCAHNPEQSKRNPGEDEAKQELKWREGGVKEKEKKREKKQDATTCPKMSVSRSLMDTLWAKFKSRQCPTVQDCLSLSEFESITDK  
QIRQWFCKRKKYKEMSKQKQGRKRKAKCGAAHL  
>gi\_741878262\_ref\_XP\_010826221.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Bos\_taurus (Used in Figure 1C,  
mammal NANOGNB group)  
MDRAPNTPSQSEYLISESQGHLVQKTQRKTITDLCQQLKMGDNFTKSESWNSGAQKQPVMPCDQNHLEVERKTKKRKRGGGEK  
EEVIEENLEKEEDEKEKKNKRYQKKKFVSRPLMDTLWAMFKFKNPTFQDISSLALEFSMTATQINRWFCRKRKIYKKEIHWRAYKNR  
RDPK  
>gi\_594093047\_ref\_XP\_006069852.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Bubalus\_bubalis  
MDRAPNTPNKRGLGIDHWIFAMLRSLIGDFDKRDVCGVGYHERYQIFICVSSSTYARGGEKEEVEEENLEKEKDEKEKKNKRYQKKKF  
VSRPLMDTLWAMFKFKNPTFQDISSLALEFSMTATQINRWFCRKKGIYKKEIHWRAYKNRRDVKYIWCLSFLLTVVWKKLI  
>gi\_532113471\_ref\_XP\_005341413.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Ictidomys\_tridecemlineatus  
MNDYQQGLEVDNLIKPKSSNLVTHKEPAMPQSQSPEHSPECSEDEGKEERNWREEAEVEEVEEVEEKLKDTVKNAAEHEELCP  
KRRVSKSLMDTLWAKFKLSAWPTVQDRLSLSEFDMTHKQIQQWFSKRRKYMKEELSEQKRSKRLKKNKASTHKTSKLQ  
>gi\_987946191\_ref\_XP\_015419561.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Myotis\_davidii  
MDSPAKRNTPTQEFSTPGEYAADPQAVSGLAQNLSNLTLPSTESPLPPKPSQQQDIGNNLKASELGLNQGMLYTRRRGART  
VASVQREMKEMRERIRLMMIRRADAIRYRTLYLGTPEHDCLEVLMEVYSSQSDLTGDLQNPDRVLFDTGSSFLDAGKRQAGKAKHA  
NIYTDSRYAFMEVYSSQSDLTGDLQNPDRVLFDTGSSFLDEGKRQAGSRKHLSGDGDLSPALRETDLAIQKQPVMPCDTNPEQSNRN  
HSKDERRKNTKWREGEGEMEEEMEKGKKLEEEQEEKKEEKEEYEPKRLVSKPLMDTLWATFKLNKCPKTKGHSLSLAFEFN  
MTEKQVNQWFFKRRKKFKQEMYKQYKRLKRSGLLFLPLVPIALGQGFLLKGMMDMGLFCQAQISPAVAAVSPRTSDARTR

>gi\_989963297\_ref\_XP\_015446944.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Pteropus\_alecto  
MERGPDPTSEVPDTALALQKQPFPVPRDQNPQSNRNHIKDERQEKKKERKGGGGKEENEKEVEEKELEEEQETEEEEKELKMENDEEYPE  
KRLVSKPLLDTLWAMFKLNKPTIGDLSLAFNMTQKQINQWFFKRRKFKNKEMKQKQYKRRKRKRYSAITYLIDYSGVLEKVS  
>gi\_759136848\_ref\_XP\_011364240.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Pteropus\_vampyrus  
MDSPQKLNPTPTLESSQKPSSEDSAGSQAVSEVLAKNLSNLTLPSTKFPFLPECSPPQQNREKDLQGLGLGQGILYRRRRRVGRTLA  
TARKERMQRMLQIIRYRTQSLLRKDPQERKIEAQLKSKPALLSDEQEGSIHSDVNLNKRITWVQDRMAWGSQGFHAAQNALALQK  
QPFVPRDQNPQSNRNHIEDERQEKKKERKGGGGKEENEKEVEEKELEEEQETEEEEKELKMENDEEYPEKRLVSKPLLDTLWAMFKLNK  
CPTIGDLSLAFNMTQKQINQWFFKRRKFKNKEMKQKQYKRRKRKKNNEEITNFCGYVQRIKRRKATVESNGFSAFCNLSLDL  
>gi\_927132211\_ref\_XP\_005655747.2\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Sus\_scrofa  
MDLCPQGLEPGDSFTESASENLAQKPPALPCDPIPERSQSNHPEAERMGKRRRREEEGEKEEVEIENVAKKEKEENEELHDKKRLAS  
KPLDTLWATFKLIRFPTRGVISLAFEFVSTETQINQWFRQKRKLYKREIYKRWKRC  
>gi\_671009744\_ref\_XP\_008695737.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Ursus\_maritimus  
MDSPKQLYPTWAPGSSQMSSEENSQEASGDSQTISEILTKNLGKLTDSSTKLPSPLEYPSSQQDREKKPQGLVECILSSRRRTGVRT  
LLIARKERMAMIRMIQYQRYLSPGSQLQKDLQKETEKEEPTVLCQNPERSKRNHSEDERGKKNWNNVPRIVSKPLMDTLWATF  
KLNKCPTRGESQLLAFEFNMTAKQIKQWFRNRKKNKDMCKQKHKKRKR  
>gi\_545219587\_ref\_XP\_005611089.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Equus\_caballus (Used in Figure  
1C, mammal NANOGNB group)  
MDLYQQGLEAGDNFTKSKSWSTPSSQNNWIGLKCINPLLEDGINGIDGINGMSFEETLSSALQFLAQDEQYMNHLQHLQDTKTCD  
KAFLNSSDATRSADLATQKQLPKPRDQNSDQSNRNHSEGERSGEKKQEEDQNERLVSKPLMDALWATFKMNRCPPTIGDKLSLAFEFN  
MTEKQIDQWFCKRKRKYNKEMKKRKYKRLKSCFILSYFEAT  
>gi\_664739596\_ref\_XP\_008527097.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Equus\_przewalskii  
MDLYQQGLEAGDNFTKSKSWSTPSSQNNWIGLKCINPLLEDGINGIDGIDGMSFEETLSSALQFLAQDEQYMNHLQHLQDTKTCD  
KAFLNSSDATRSADLATQKQLPKPRDQNSDQSNRNHSEGERSGEKKQEEDQNERLVSKPLMDALWATFKMNRCPPTIGDKLSLAFEFN  
MTEKQIDQWFCKRKRKYNKEMKKQYKRLKSCFILSYFEAT  
>gi\_928173446\_ref\_XP\_005637249.2\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Canis\_lupus\_familiaris (Used in  
Figure 1C, mammal NANOGNB group)  
MRRKLFKVERTPDTLKPDTSNFAIQKEPAMLCGQNPQSNRNHHEDERRKEKWREGERGEEKEVEEVEEKELEEEKEERCPQERLVSKP  
LMDTLWAMFKLNKCPTRGDSQSLAFEFNMTVKQIKQWFRKRRKSYNKDMYKQYKRRKSKSH  
>gi\_859859290\_ref\_XP\_004766798.2\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Mustela\_putorius\_furo  
MLCDQNPQAKRNRSEDERKGGKKKWKEREREKEVEIEDGLEEEQEKEEKNEEQYPQKRIVSKPLMDTLWANFKLNKPTIGDIRSLA  
FEFNMTVKQIKQWFHRRRKYKNDMYKQPKRPRKRRLCVALFLADTGALDPRAGAGTPEDKRQGPQSAVPAHDVQRPAIAVQL  
QRTRLLSLRELTVAGYGDTPI  
>gi\_961713726\_ref\_XP\_014916992.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Acinonyx\_jubatus  
MSLHQGLEAGDNFTKSTSWNFAIQKPDVLCQNPQSNRKHSSDERKGGKKKWKEREGEEKKEELEEKELEEEQEMEEENEQHPQ  
ERLVSKPLMDTLWATFKLNKCPMTGDSRSLAFEFNMTVKQIKQWFHRRRKYKNDMYKQYKRRKSKSH  
>gi\_755747243\_ref\_XP\_011282107.1\_\_PREDICTED\_NANOG\_neighbor\_homeobox\_Felis\_catus  
MPNSCEGHRTRNPGDAIGPGVFRARRNLPGQPRDGLSRGLSGSKEVSPQPNPTSACWLFLLRPRGHPDKAFALIGTAGVSPGSGTS  
HRLQRAQGGVASPRAGCSAACTLNPCQSEAPVPAQKLSVSASNSPGWLLQEFVVAEACAPCSNFQANHDPRPECGSTGGPVEGDYP  
TDNPPFIKAKLHKSSTRSFTVRGPPSPDPSTPWALPSGWLDSSASGNVLAAMVDVPKTQPTFGKKCGNHQPHKVTKYKEGKDSL  
AQGKRRYARKQRYGGQTKPIFWKAKTAEKIVLFEWVEPNCRSKRMLAIKSKCFEPQGGSTKSTEGAPRGRGWAGSGSPLPHRNSL  
SAAEIRDLRDEGKGLFMIESGRVPDSNVSNLVGIFNPDAIQKPDVLCQNPQSNRNHSSDERKGGKKKWNREGEKKEELEEKE  
EEQEMEEENEQHPQERLVSKPLMDTLWATFKLNKCPMTGDSRSLAFEFNMTVKQIKQWFHRRRKYKNDMYKQYKRRKSKSH  
>NANOG\_1\_Lepisosteus\_oculatus gi|973216295|ref|XP\_015194659.1|:1-446 PREDICTED: homeobox protein Hox-  
A4-like isoform X1 [Lepisosteus oculatus] (Used in Figure 1C)  
meewnslnpnyssayhtyaygmtyppppvqnhpslgwsgtgftpsgsdglfldvpptapqnalpqqdatrvpgvplagspsdssetep  
stpdswsspstdesyalrpppapcspaetacaepapcspaetacaepapcspaeiawaepasssqagvggalleppgalaagkr  
shrlrmayserqvmvlcecyamikmyltpaemksladkiglsykqvkswfqnrmrekrllqkmtsggelvllssvypsiqaqaskgps  
svypkispqtseslssvypdispqmltdptcpyssiphqpllesssvypnispgvlnpsscypsiiprisespsaypyippqfrg  
fystsqfngqyfkknpppyyppscpcypsrvnvaagsleswalpsagrkygslngpirysgkviygecstaplqqasatlpqwg  
eelqipasfrk  
>NANOG\_2\_Lepisosteus\_oculatus gi|973216279|ref|XP\_015194651.1|:1-352 PREDICTED: homeobox protein  
NANOG-like [Lepisosteus oculatus] (Used in Figure 1C)  
Mspflgadsvesgappwppgeldswsspsadesyalrpppapcspaetacaepvpapcswakgaeegqqqgallmdmpgaapaagkrklrtafsetqm  
talcerymikmyltpaemksladkiglsykqvktwfqnrmkqkrqklttegeevpssgyppiiqplllsssaypnipplalvtssaytniaqtsessaypnaq  
aeasessypsiqtqsfedlgsyvpnfqatlesptsvhasvspqtsesptavypnvspqtsksssvypnislqfsvnncpypniplvtseipsslynnvsnilegp  
ssaypnippqlsfrfpasrpadpradlptllp  
>XP\_011519152.1 PREDICTED: homeobox protein NANOG isoform X1 [Homo sapiens] (Used in Figure 1C, mammal  
NANOG group)

MSVDPACQSLPCFEASDCKESSPMPVICGPEENYPQLMSSAEMPHTETVSPLPSSMDLLIQDSPDSSTSPKGGKQPTSAEKSVAKKED  
KVPVKKQKTRTVFSSTQLCVLNDRFQRQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKSKRWQKNNWPKNNSGVTQASAPTY  
PSLYSSYHQGCLVNPTGNLPMWSNQTWNNSTWSNQTQNIQSWNSHWSNTQTWCTQSWNNQAWNSPFYNCGEESLQSCMQF  
QPNSPASDLEAALEAAGEGLNVIQQTTRYFSTPQTMDLFLNYSMNMQPEDV

>nanog\_Choloepus\_hoffmanni\_ENSCHOT00000000973\_peptide:ENSCHOP00000000858\_pep:NOVEL\_protein\_coding

MSVDLASTQSLPCPETDNSRESSPMPEIYEAEKNYASLQMSAEVHQPETVSPLPSSVDLLIQDSPDSSTSPKVKLPMSGGKSAGRK  
EDEGQVKKQKIRTVFSQTQLCILNDRFQKQKYLSQLQMQELSNILNLSYKQVKTWFQNRQMKCKKWQKNTNWSKNGNSVIQKGSAPT  
EFPGLYSSYPQGCLANTSGNFPMWSNQTWNSPIWSSHSWSSQHWYTQAWNNNPVWNNQFQNSGEEESLQLQVQFQQNSPASDLEATLG  
SAGENHNVIQAAKYFSTLHTMDLFPNYFMNTQPE

>nanognb\_Choloepus\_hoffmanni\_ENSCHOT00000004719peptide:ENSCHOP00000004164pep:KNOWN\_BY\_PROJECTI  
ON\_protein\_coding (Used in Figure 1C, mammal NANOGNB group)

RQQAMSCNQNPESNRKHGKDEERRRKKKWKKGAAAGRSRGAAAEKQKQKQEEQEEPPQQNKKECCQHRERKSVSRPLMDKLWAKFK  
LNNCPSARQHQSLSLEFGLTDKQISQWFNKMRRKYNKEMSQLKHNIHQ

>nanog\_Procavia\_capensis\_ENSPCAT00000015420peptide:ENSPCAP00000014417pep:NOVEL\_protein\_coding (Used  
in Figure 1C, mammal NANOG group)

SPLPSSMDQLAQDSPDSSTSPKIKPLASASEKSLVKKEGKGQGGKQKVRTVFSQTQLCVLKDQKQKYLSQLQMQELSEVLNLSYK  
QVKTWFQNRQMKCKRWQKNTTWSKNGSGFTQKILTPNKFLLELCSSYHQGCLNNQTWNNPVWSNQTWNNSAWSNQTWNTQAWGNHWSN  
SQAWCTQSWNSQSSWNNQFQSCGEEFLLPQIQFQPNVSDLETSQALDLFLNYSMNMQPEDV