**Supporting Information**

**Table A Original date of activity assay of recombinant β2-AR**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Dilution rate** | | **HRP-clenbuterol** | **HRP-ractopamine** | **HRP-salbutamol** |
| **1:500** | average | 1.286666667 | 0.644333333 | 0.781666667 |
| 1 | 1.293 | 0.645 | 0.788 |
| 2 | 1.279 | 0.651 | 0.776 |
| 3 | 1.288 | 0.637 | 0.781 |
| **1:1000** | average | 1.024333333 | 0.438666667 | 0.530666667 |
| 1 | 1.027 | 0.432 | 0.528 |
| 2 | 1.031 | 0.448 | 0.541 |
| 3 | 1.015 | 0.436 | 0.523 |
| **1:3000** | average | 0.521333333 | 0.277 | 0.423333333 |
| 1 | 0.526 | 0.283 | 0.438 |
| 2 | 0.529 | 0.291 | 0.411 |
| 3 | 0.509 | 0.257 | 0.421 |
| **1:6000** | average | 0.368666667 | 0.113333333 | 0.155333333 |
| 1 | 0.362 | 0.119 | 0.161 |
| 2 | 0.379 | 0.107 | 0.157 |
| 3 | 0.365 | 0.114 | 0.148 |

**Table B Original date of optimization of the coating buffer**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **OD450** | **OD450** | **OD450** | **average** | **SD** |
| **CBS** | 1.098 | 1.116 | 1.114 | 1.109333 | 0.0099865766 |
| **PBS** | 0.936 | 0.931 | 0.915 | 0.927333 | 0.010969655 |
| **Tris-HCl** | 1.021 | 1.006 | 1.017 | 1.014667 | 0.007767453 |

**Table C** **Original date of optimization of blocking buffer**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **OD450** | **OD450** | **OD450** | **average** | **SD** |
| **1% BSA** | 1.027 | 1.009 | 1.005 | 1.013667 | 0.01171893 |
| **5% skim milk** | 0.919 | 0.912 | 0.931 | 0.920667 | 0.00960902 |
| **1% OVA** | 0.959 | 0.977 | 0.969 | 0.968333 | 0.0090185 |

**Table D Original date of establishment of calibration curve**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **concentration of β‑agonists (μg/L)** | | | | | |
|  |  | 0 | 10 | 50 | 100 | 500 | 1000 |
| **CBL** | average | 0.967 | 0.633333 | 0.418667 | 0.326667 | 0.168 | 0.104 |
| 1 | 0.971 | 0.638 | 0.411 | 0.309 | 0.178 | 0.117 |
| 2 | 0.958 | 0.635 | 0.437 | 0.333 | 0.181 | 0.098 |
| 3 | 0.972 | 0.627 | 0.408 | 0.338 | 0.145 | 0.097 |
| SD | 0.006377 | 0.004643 | 0.013021 | 0.012658 | 0.01631 | 0.009201 |
| **RAC** | average | 0.959 | 0.827667 | 0.583 | 0.444667 | 0.239333 | 0.122667 |
| 1 | 0.966 | 0.838 | 0.592 | 0.472 | 0.253 | 0.144 |
| 2 | 0.948 | 0.819 | 0.577 | 0.431 | 0.218 | 0.153 |
| 3 | 0.963 | 0.826 | 0.58 | 0.431 | 0.247 | 0.071 |
| SD | 0.007874 | 0.007846 | 0.006481 | 0.019328 | 0.015283 | 0.036718 |
| **SAL** | average | 0.951 | 0.756 | 0.519 | 0.407667 | 0.197667 | 0.122 |
| 1 | 0.955 | 0.783 | 0.533 | 0.419 | 0.205 | 0.134 |
| 2 | 0.961 | 0.779 | 0.529 | 0.389 | 0.211 | 0.141 |
| 3 | 0.937 | 0.706 | 0.495 | 0.415 | 0.177 | 0.091 |
| SD | 0.010198 | 0.035393 | 0.017049 | 0.0133 | 0.014817 | 0.022106 |

**Table E Original date of recovery of β–agonist sdetermined by developed ELRA**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CBL** | **concentration of β‑agonists (μg/L)** | **1** | **10** | **50** | **100** |
| **average** | 0.5202 | 6.3798 | 37.2996 | 77.10 |
| **1** | 0.578 | 5.614 | 36.302 | 77.562 |
| **2** | 0.445 | 5.716 | 42.283 | 84.133 |
| **3** | 0.496 | 6.688 | 37.426 | 66.757 |
| **4** | 0.496 | 7.090 | 37.171 | 82.984 |
| **5** | 0.586 | 6.791 | 33.316 | 74.064 |
| **SD** | 0.06020133 | 0.669988 | 3.229979 | 7.079776 |
| **RAC** | **concentration of β‑agonists (μg/L)** | **1** | **10** | **50** | **100** |
| **average** | 0.43 | 5.6396 | 34.4996 | 71.2004 |
| **1** | 0.477 | 5.606 | 29.408 | 80.513 |
| **2** | 0.402 | 6.729 | 31.086 | 74.739 |
| **3** | 0.462 | 5.182 | 37.370 | 76.566 |
| **4** | 0.429 | 4.573 | 38.391 | 60.360 |
| **5** | 0.380 | 6.108 | 36.243 | 63.824 |
| **SD** | 0.04036707 | 0.829812 | 3.999959 | 8.659697 |
| **SAL** | **concentration of β‑agonists (μg/L)** | **1** | **10** | **50** | **100** |
| **average** | 0.4802 | 6.5304 | 36.20 | 75.70 |
| **1** | 0.545 | 6.558 | 37.828 | 80.549 |
| **2** | 0.526 | 6.988 | 36.900 | 70.246 |
| **3** | 0.366 | 6.208 | 36.087 | 66.730 |
| **4** | 0.474 | 5.469 | 30.435 | 83.936 |
| **5** | 0.490 | 7.429 | 39.751 | 77.040 |
| **SD** | 0.06977249 | 0.749692 | 3.499928 | 7.129991 |