Supporting Information

A Multipurpose Receptor Composed of Promiscuous Proteins – Analyte Detection through Pattern Recocnition.
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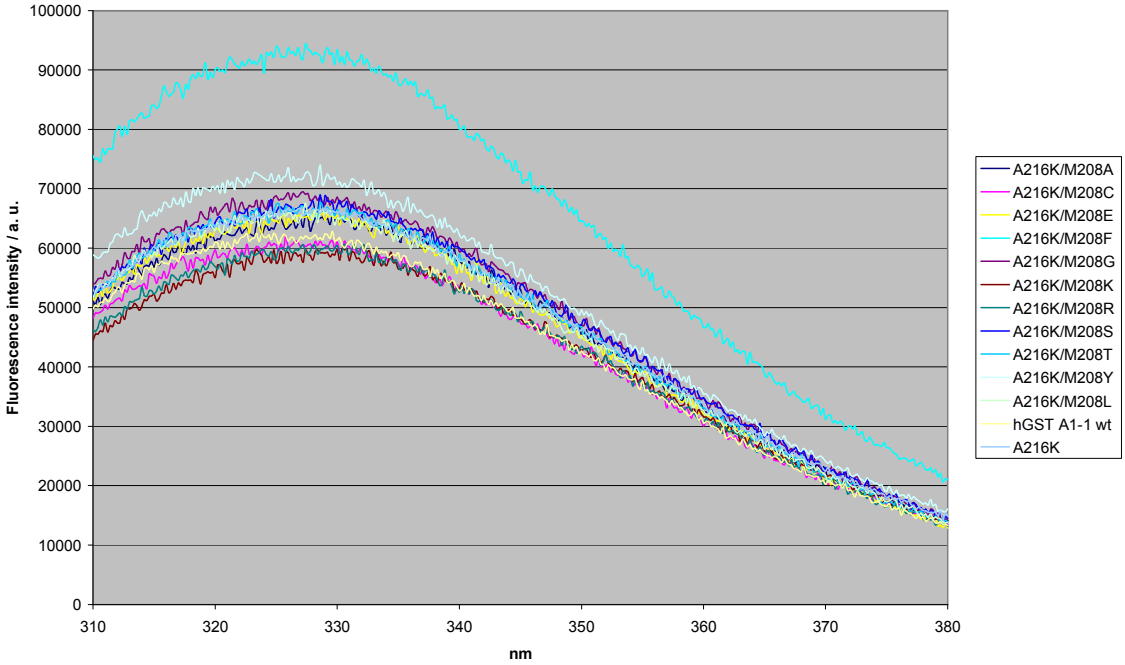
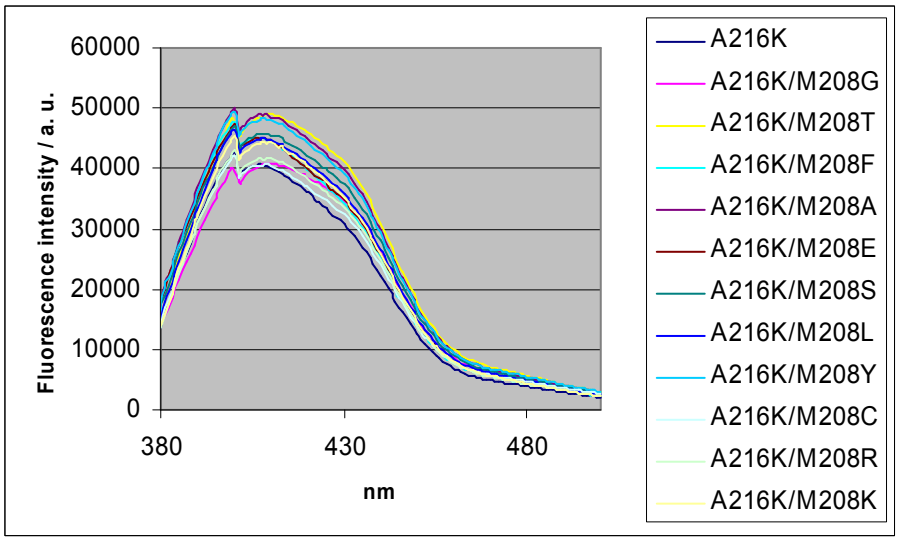
Below: Fluorescence spectra of the eleven purified A216K/M208X mutants together with A216K and hGST A1-1 wt, excited at 280 nm.



Below: Fluorescence spectra of the purified and coumarin-modified A216K/M208X mutants together with coumarin-modified A216K, excited at 355 nm.

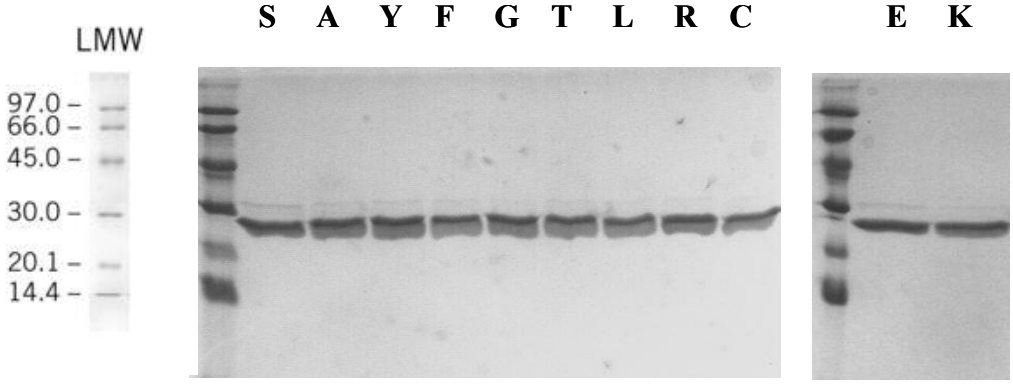


Below: The specific activities towards CDNB and GSH of the eleven A216K/M208X mutants. Shown here in comparison with A216K and GST A1-1.

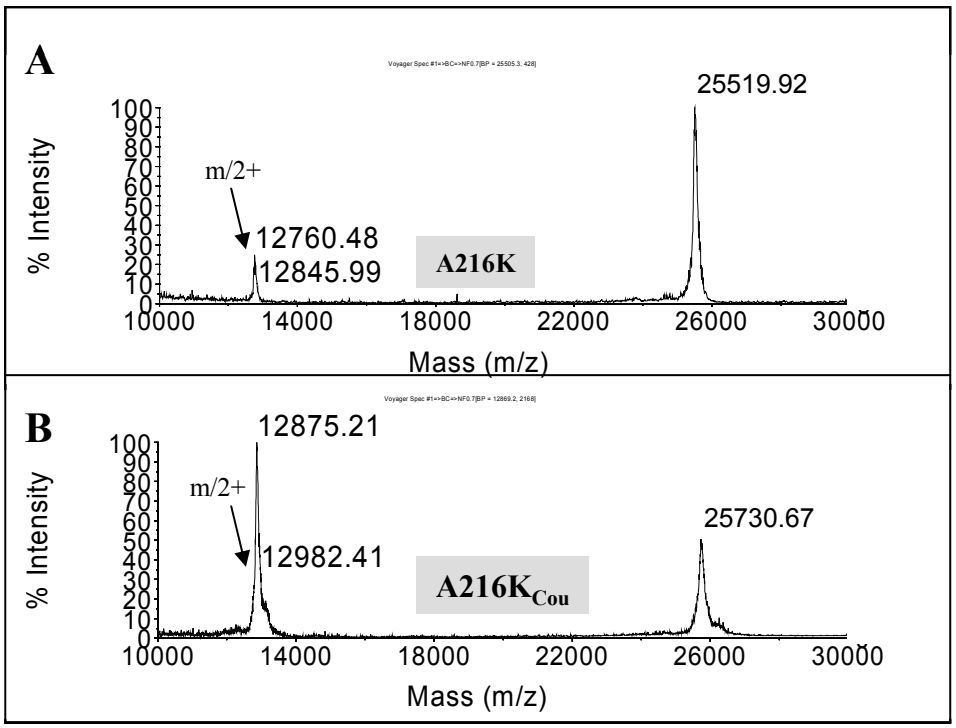
Table 1: Specific activity of the purified eleven double mutants, A216K and GST A1-1 using 1mM CDNB and 1mM GSH.

Mutant	Specific activity (µmol*min^{-1}*mg^{-1})
A216K/M208S	8,1
A216K/M208A	8,0
A216K/M208Y	9,9
A216K/M208F	35,6
A216K/M208G	3,1
A216K/M208T	12,6
A216K/M208L	21,2
A216K/M208R	2,6
A216K/M208C	30,7
A216K/M208E	19,1
A216K/M208K	2,6
GST A1-1	60,7
A216K	27,4

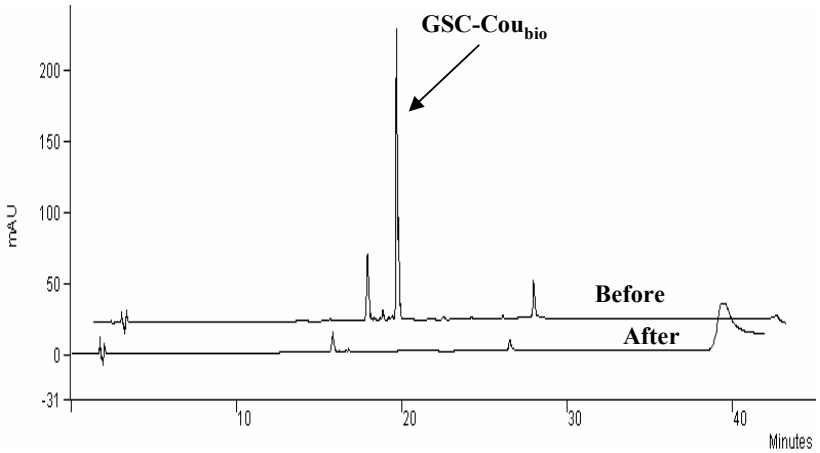
Below: Coomassie stained SDS-PAGE gels showing the purities of the eleven A216K/M208X double mutants following purification. 2.5 μL of 50 μM (~ 3.2 μg) protein was transferred into each well.



Below: MALDI-MS spectra showing A) A216K in buffer before labeling with GSC-Cou_{bio} and B) the conjugate $A216K_{Cou}$ after labeling with GSC-Cou_{bio} for 5 h. The calculated masses are 25556.89 Da and 25758.72 Da for A216K and $A216K_{Cou}$, respectively. The double charged peaks are indicated with arrows.



Below: HPLC chromatograms (λ= 355 nm) showing a typical protein labeling mixture before and after the scavenging step using NA ™ beads.



Below: A MALDI-MS spectrum of proteolytic (*S. aureus* V-8) peptide fragments from A216K$_{Cou}$, site-specific immobilized on the hydrogel surface via Cys 112.