Supplementary material

Low-fouling SPR detection of lysozyme and aggregates

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Table S1. Comparison of the analytical characteristics of lysozyme sensors

Detection mode[a]	Detection limit (nM)	Reference
SPR	20	This work
SPR-previous work	70	[29]
SPR, graphene coated interface	0.5	[21]
SPR, MIP	21	[54]
SPR, competitive test, polyclonal antibody	0.01	[55]
Fluorescence/graphene-based platform, amplification	5.6	[56]
SWV/Au NP amplification	2.0 x 10-5	[57]
SWV/Three-way junction DNA structure, Fc-tagged cDNA,	0.2	[58]
EIS, target-induced aptamer displacement	0.07	[19]
EIS/MWCNT-SPE	862	[20]
EIS/Chitosan-graphene oxide	28.5	[59]
EIS, aptamer, on recognition-induced charge switching	14	[60]

[a] Abbreviations: SWV: Square Wave Voltammetry. EIS: Electrochemical Impedance Spectroscopy. MWCNT: Multi Wall Carbon Nanotubes. SPE: Screen-printed Electrode. NP: nanoparticle. MIP: Molecularly Imprinted Polymer

Table S2 Properties of proteins investigated in the selectivity study

Analyte	Size (kDa)	Isoelectric point
Lysozyme	14.3	11
Myoglobin	17	7.2
Cytochrome C	12	10.2
Bovine Serum Albumin	66	4.7
Salmon Calcitonin	3.4	8.9

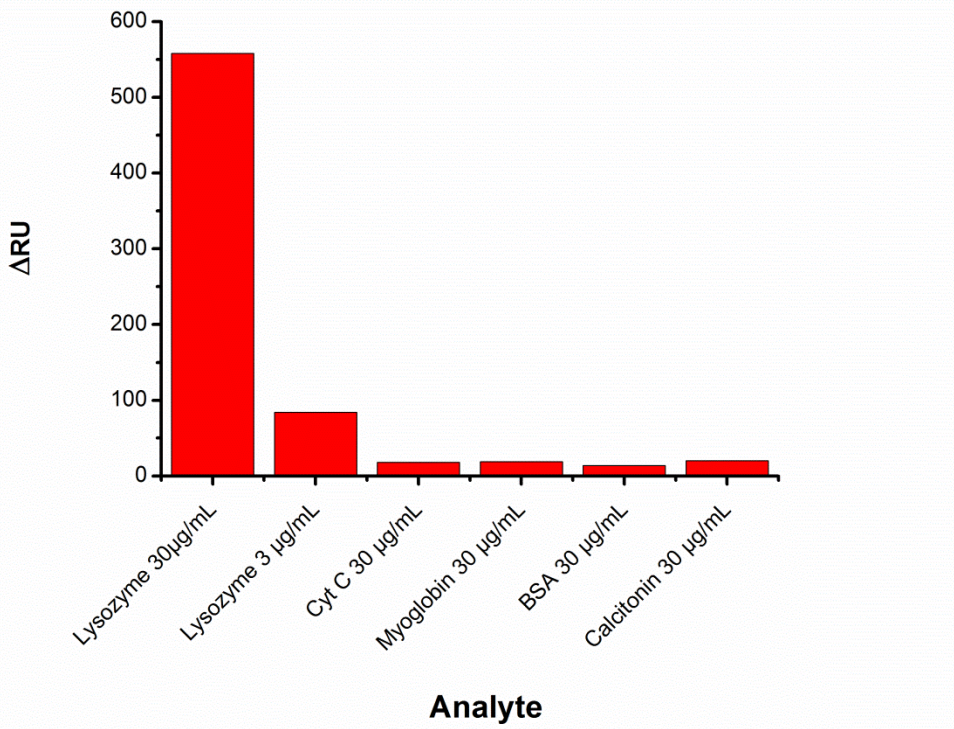

Figure S1. Net signal (calculated as $\Delta RU = \Delta RU_{aptamer\ channel} - \Delta RU_{reference\ channel}$) recorded with the aptasensor for lysozyme (at 3 µg/mL and 30 µg/mL) and for several proteins at 30 µg/mL. Running buffer: 20 mM Tris–HCl pH 7.4 with 100 mM NaCl and 5 mM $MgCl_2$. The protein solutions were injected for 5 minutes at 100 µL/min, followed by rinsing with buffer for 5 minutes at the same flow rate.