Supplementary material

A quadruple-label time-resolved fluorescent immunochromatographic assay for simultaneous quantitative determination of three mycotoxins in grains

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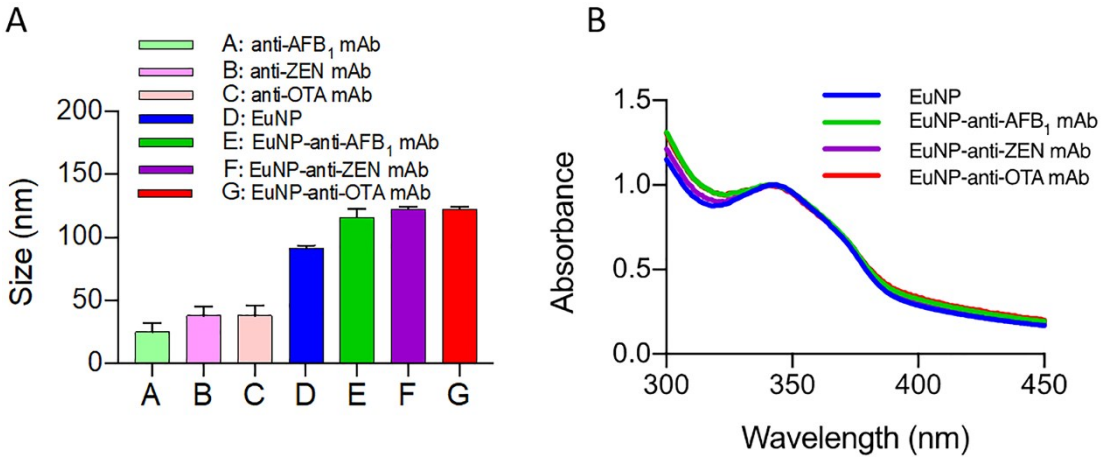

Figure S1. A) Particle size and B) UV absorption spectra for EuNP and three probes

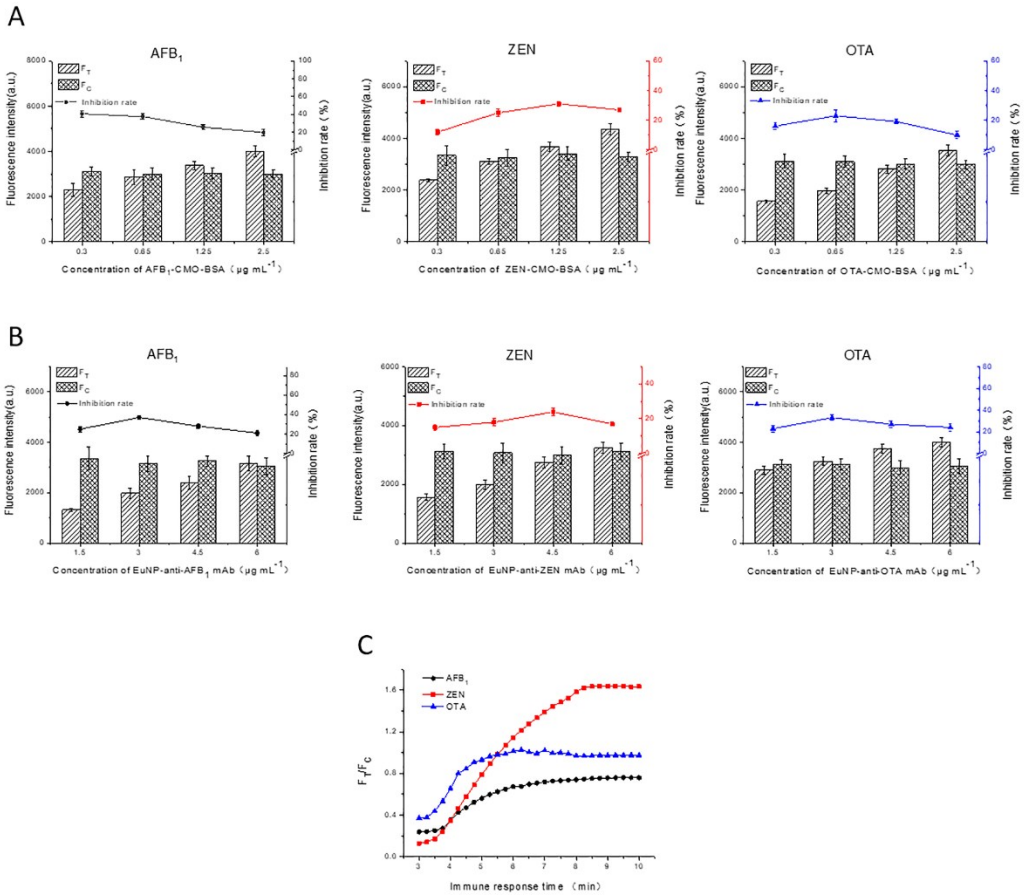

Figure S2 Optimization of the concentration of A) antigen (μg mL^{-1}) and B) immunoprobes (μg mL^{-1}). C) Immunodynamic curve (min)

Table S1 Maximum residue limits for AFB_1, ZEN and OTA in foods in China, USA and the EU

	AFB_1	ZEN	OTA
China[10]	5 μg kg^{-1} in wheat, barley and their products, while 20 μg kg^{-1} in corn, cornmeal and corn products	60 μg kg^{-1} in wheat and corn	5 μg kg^{-1} in cereals and their products
FDA[11]	20 μg kg^{-1} in general sample	Not specified	Not specified
EU[12]	2 μg kg^{-1} in cereals and their products	75 μg kg^{-1} in cereals and their products	3 μg kg^{-1} in cereals and their products

Table S2 Cross-reaction rate of AFB_1, ZEN and OTA measured by QL-TRFICA

Target substance	AFB_1	AFB_2	AFM_1	AFM_2	AFG_1	AFG_2	OTA	OTB
CR (%)	100	18.11	11.90	1.47	5.43	4.98	100	21.73
Target substance	ZEN	ZAN	α□ZOL	β□ZOL	α□ZAL	β□ZAL	DON	T-2
CR (%)	100	19.34	17.62	12.96	16.51	11.02	<0.01	<0.01