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## Supplementary Information

2 **Fig. S1.** The image of TEM for the MNP.

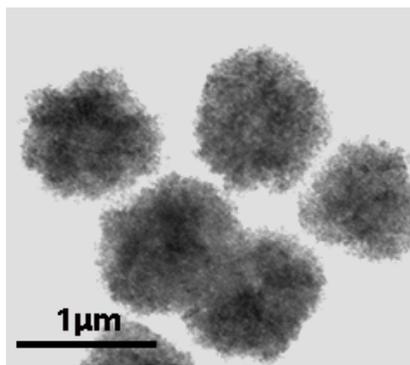
3 **Fig. S2.** The image of TEM for the AuNP (A) and the UV/vis spectra for the complexes of mAb-  
4 AuNP (B).

5 **Fig. S3.** The results of interference between the probes.

6 **Fig. S4.** The correlation of the positive results between the UFOIA and LC-MS/MS.

7 **Table S1** The optimal of working concentration for detecting ZEN in the UFOIA.

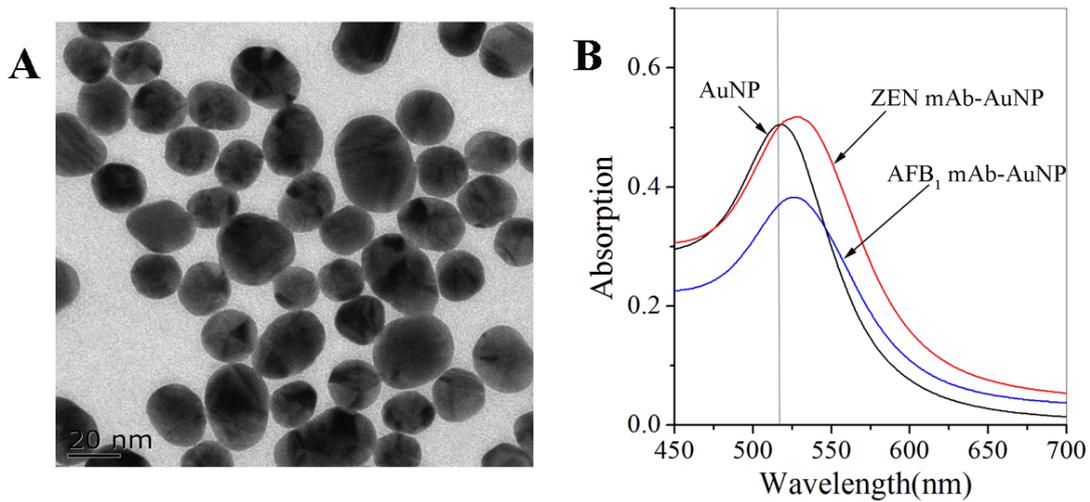
8 **Table S2** The optimal of working concentration for detecting AFB<sub>1</sub> in the UFOIA.



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**Fig. S1.** The image of TEM for the MNP.

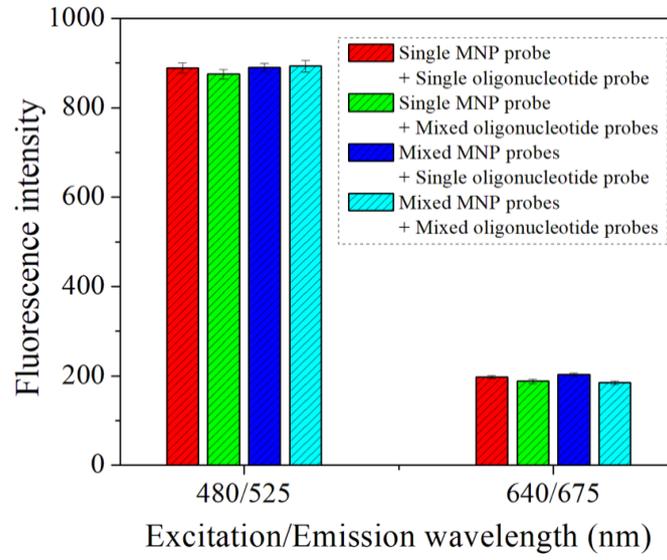


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13 **Fig. S2.** The image of TEM for the AuNP (A) and the UV/vis spectra for the complexes of mAb-

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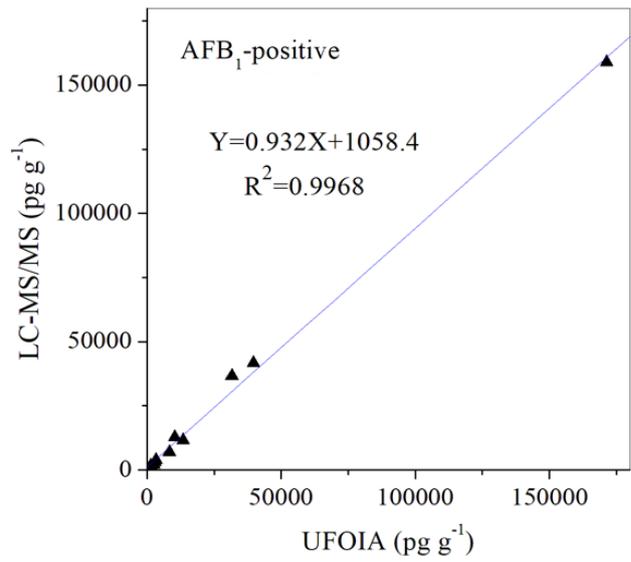
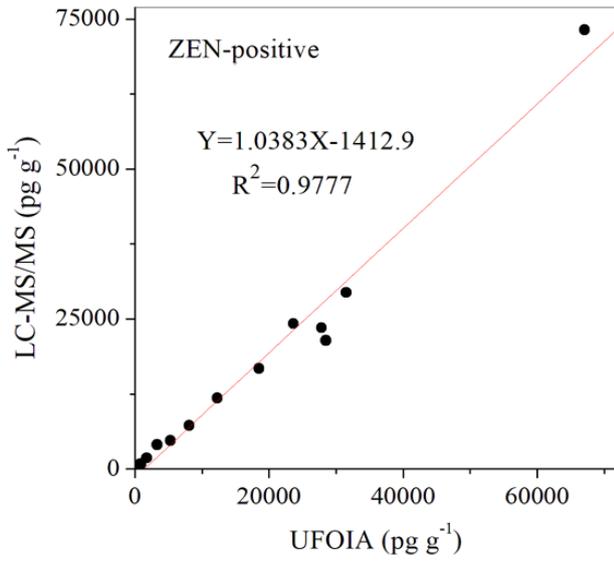
AuNP (B).



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**Fig. S3.** The results of interference between the probes.



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**Fig. S4.** The correlation of the positive results between the UFOIA and LC-MS/MS.

22 **Table S1** The optimal of working concentration for detecting ZEN in the UFOIA.

MNP probe for ZEN	Fluorometric oligonucleotide probes for ZEN					
	IC <sub>50</sub>			F <sub>0</sub> /IC <sub>50</sub>		
	1:2	1:5	1:10	1:2	1:5	1:10
1:100	73.92	58.43	49.76	5.33	6.13	6.39
1:500	93.02	<b>49.72</b>	69.43	3.47	<b>8.02</b>	4.45
1:1000	88.43	106.84	129.74	4.18	3.20	2.61
1:2000	123.64	174.39	110.43	2.98	1.97	3.41

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**Table S2** The optimal of working concentration for detecting AFB<sub>1</sub> in the UFOIA.

MNP probe for AFB <sub>1</sub>	Fluorometric oligonucleotide probes for AFB <sub>1</sub>					
	IC <sub>50</sub>			F <sub>0</sub> /IC <sub>50</sub>		
	1:5	1:10	1:20	1:5	1:10	1:20
1:100	64.29	79.65	64.93	10.08	6.53	9.89
1:500	59.03	<b>29.65</b>	96.73	8.44	<b>21.89</b>	5.56
1:1000	97.30	77.93	105.84	5.53	8.20	5.28
1:2000	204.72	132.84	173.63	3.08	4.44	2.78