Supporting Information[1]

Synthesis of magnetic molecularly imprinted nanoparticles with multiple recognition sites for the simultaneous and selective capture of two glycoproteins

Xiao-Yu Sun[a, b], Run-Tian Ma[a], Juan Chen[a] and Yan-Ping Shi[a*]*

[a] CAS Key Laboratory of Chemistry of Northwestern Plant Resources and Key Laboratory for Natural Medicine of Gansu Province, Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences (CAS), Lanzhou 730000, P. R. China

[b] University of Chinese Academy of Sciences, Chinese Academy of Sciences, Beijing 100049, P. R. China

* Correspondence: Juan Chen and Yan-Ping Shi; Tel.: +86-931-4968208; fax: +86-931-4968094. E-mail: chenjuan@licp.cas.cn (J. Chen), shiyp@licp.cas.cn (Y.-P. Shi).

Table S1 Information of the used proteins.

Protein	HRP	OVA	IgG	BSA
M_w / kDa	40	45	150	66
pI	7.2	4.7	8.0	4.8

Table S2 Chemical compositions (At. %) of Fe_3O_4-FPBA NPs by XPS.

Element	B	C	Fe	N	O	Totals
Atomic%	1.82	39.02	14.37	4.16	40.63	100

Table S3 Effect of the mass ratio of HRP to OVA on the adsorption perfomance of MMIPs.

m_{HRP}/m_{OVA}	Analysts	Q_{MMIPs} (mg g^{-1})	Total Q_{MMIPs} (mg g^{-1})
2 : 3	HRP	23.97	63.67
	OVA	39.70	
1 : 1	HRP	25.79	61.78
	OVA	35.99	
4 : 3	HRP	24.99	59.66
	OVA	34.67	
3 : 2	HRP	28.77	58.10
	OVA	29.33	
2 : 1	HRP	30.63	56.66
	OVA	26.03	

Table S4 The selectivity proerties of MMIPs toward HRP and OVA.

Polymers	Proteins	Q (mg g^{-1})	*IF*	*α*
MMIPs	HRP	33.02 ± 1.38	2.74 ± 0.19	—
	IgG	11.94 ± 2.04	1.04 ± 0.24	2.77 ± 0.86
	BSA	11.00 ± 2.50	1.01 ± 0.31	2.87 ± 0.75
MMIPs	OVA	51.44 ± 2.49	3.86 ± 0.45	—
	IgG	11.94 ± 2.04	1.04 ± 0.24	3.87 ± 1.13
	BSA	11.00 ± 2.50	1.01 ± 0.31	4.17 ± 1.81
MNIPs	HRP	12.08 ± 0.97	—	—
	OVA	13.31 ± 2.29	—	—
	IgG	11.62 ± 0.86	—	—
	BSA	11.11 ± 0.97	—	—

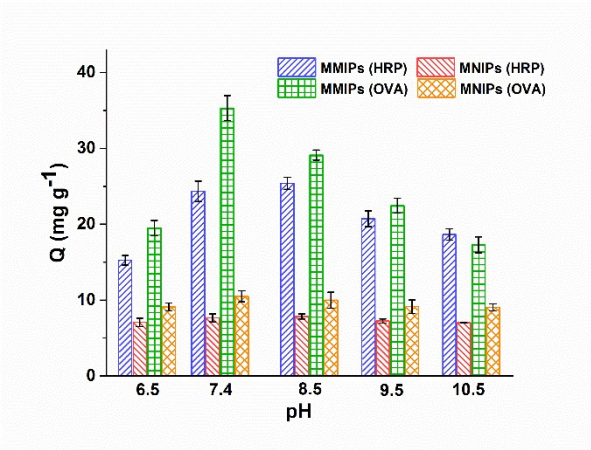

Fig. S1 Effect of binding pH on the adsorption capacity of MMIPs and MNIPs.

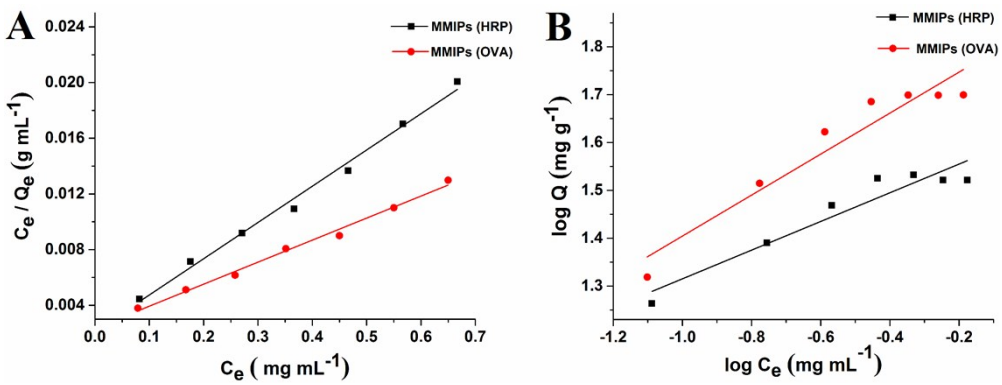

Fig. S2 Langmuir (A) and Freundlich (B) plots to eveluate the adsorption properties of MMIPs.

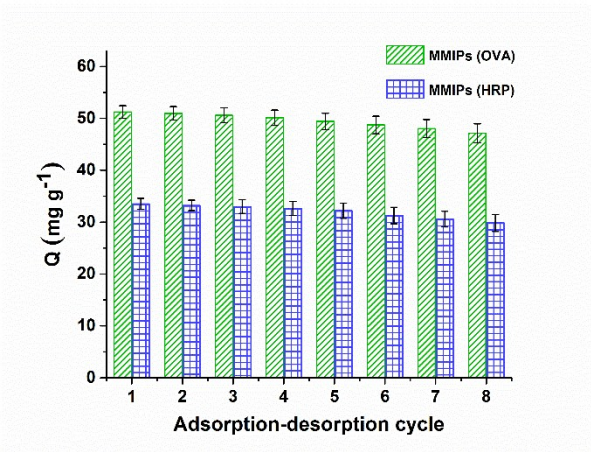

Fig. S3 The resusability of MMIPs toward HRP and OVA.