

Supporting information

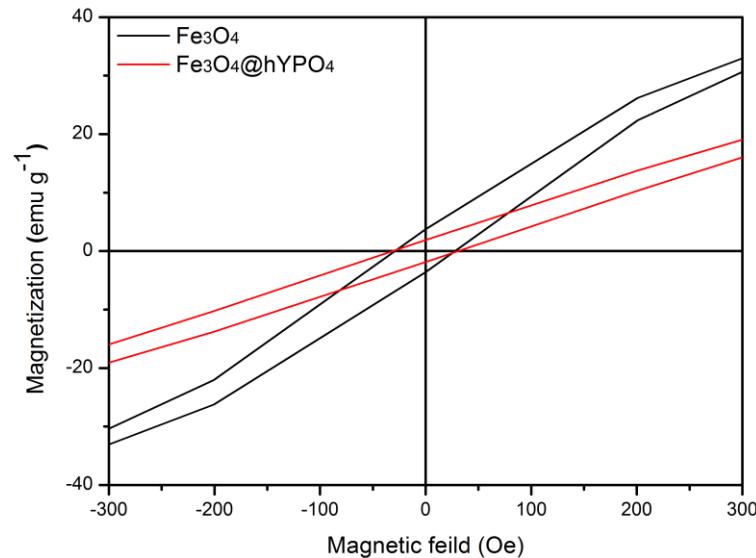


Fig. S1 Magnified magnetization curves near central magnetic field of the Fe₃O₄ and the Fe₃O₄@hYPO₄ samples at 300K.

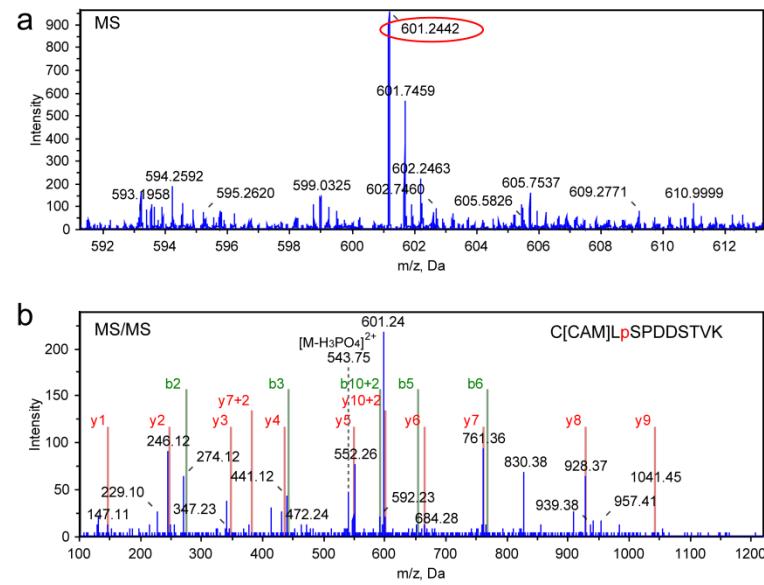


Fig. S2 Mass spectra of the phosphopeptide (MW=1200.47) enriched by the Fe₃O₄@fTiO₂ affinity microspheres as an example: (a) MS spectrum; (b) MS-MS spectrum.

Table S1. The phosphopeptides enriched from tryptic digest of β -casein by the $\text{Fe}_3\text{O}_4@\text{hYPO}_4$ affinity microspheres.

AA	Peptide sequences	Theoretical <i>m/z</i>	Phosphorylation site
33-48	FQ[pS]EEQQQTEDELQDK	2061.8	1
33-52	FQ[pS]EEQQQTEDELQDKIHPF	2556.0	1
1-25	RELEELNVPGEIVE[pS]L[pS][pS][pS]EESITR	3122.2	4