Supporting Information
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Magnetic-dependent protein corona of tailor-made

superparagmagnetic iron oxides alters their biological behaviors

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**Table S1**.Nanoparticles suspension were incubated with complete cell culture medium with or without static magnetic field (SMF). The NPs/protein were separated through SMF and wash with PBS. The DLS data of magnetic field conditioning SPIOS-hard corona (M-P) and SPIOs-hard corona(S-P).

	Size (nm)	Zeta potential (mv)
M-P	178.2±54.8	-22.7±0.4
S-P	175.3 ±11.2	-19.0±0.3



Fig. S3 TEM image of M-P (A) and S-P (B)



Fig S4. The scheme of the model of in vivo protein corona.



**Figure S5**. SDS-PAGE of M-P-Plasma and S-P-Plasma. (A) Relative protein abundance (RPA) values of proteins identified by MS classified according to their physiological function.



**Fig. S6** ROS production in M-P and S-P. (A) Inverted fluorescence microscopic analysis of HepG2 cells were incubated with M-P and S-P for 24h in ROS production. (B) Inverted fluorescence microscopic analysis of 3T3 celsI were incubated with M-P and S-P for 24h in ROS production.



**Fig. S7** Cells were pretreated with or without ROS scavenger GSH. Then, cells were incubated with M-P for 24h. Cell viability of M-P and M-P+GSH