

Synthesis of Magnetic Nanoparticles with IDA or TED Modified Surface for Purification and Immobilization of Poly-Histidine Tagged Proteins

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Supporting Information

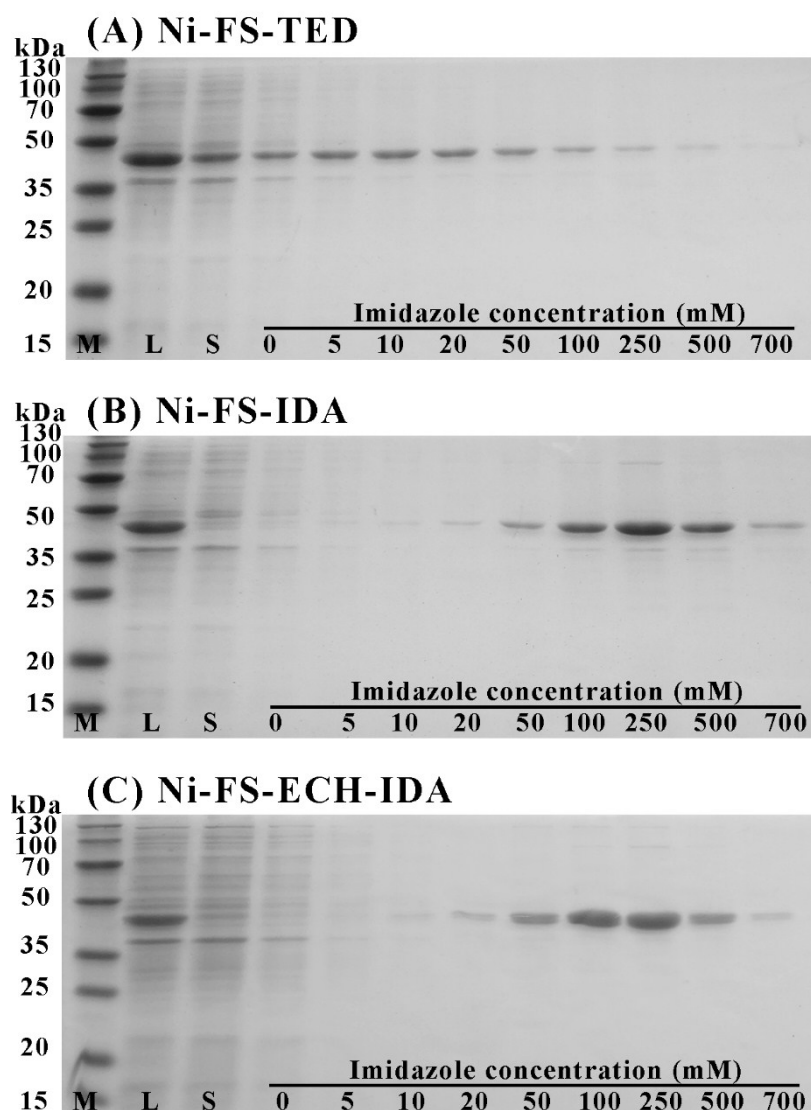


Figure S1. SDS-PAGE analysis of elution fractions of DspB after binding on Ni-MNPs. Panels (A-C), SDS Page analysis of DspB purification by Ni-MNPs. Lane M: the protein molecular weight marker, Lane L: cell lysate, Lane S: supernatant after adsorption; other lanes are elution fractions of stepwise gradient imidazole from 0 to 700 mM.

Table S1. Pseudo-second-order kinetic parameters for the adsorption of DspB by Ni-MNPs.

Ni-MNPs	k_1 [g/(mg min)]	q_e (mg/g)	v_0 (mg/(g min))	R^2
Ni-FS-TED	0.0051	97.1	47.9	0.998
Ni-FS-IDA	0.0065	142.9	133.3	0.997
Ni-FS-ECH-IDA	0.0060	166.7	166.7	0.999

Table S2. Langmuir isotherm parameters for the adsorption of DspB by Ni-MNPs.

Ni-MNPs	q_m (mg/g)	k_L (mL/mg)	ΔG^0 (kJ/mol)	R^2
Ni-FS-TED	95.7	57.6	-36.4	0.963
Ni-FS-IDA	135.0	122.2	-38.3	0.971
Ni-FS-ECH-IDA	132.6	137.2	-38.6	0.959