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# **Electronic Supplementary Information**

## Magnetic and fluorescent nanohybrids with surface imprinting silica as dual-

# functional sensing platform for ratiometric fluorescence detection of

### phycoerythrin

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**Fig. S1.** Hydrodynamic diameter distributions of the prepared B-CDs, magnetic  $Fe_3O_4$  NPs,  $Fe_3O_4/B$ -CDs complex and  $Fe_3O_4/B$ -CDs/PE-imprinted SiO<sub>2</sub> nanohybrids and the corresponding average diameters measured by DLS.



**Fig. S2.** (a) Effects of quality ratio of B-CDs:  $Fe_3O_4$  NPs on relative FL intensities of B-CDs and magnetization intensities of  $Fe_3O_4$  NPs in the prepared nanohybrids. (b) Effects of volume ratio of volume ratio of APTES: TEOS on hydrodynamic diameter of the MIP-based nanohybrids measured by DLS. (c) Effects of quality of PE on the FL response time of B-CDs in the MIP-based nanohybrids.