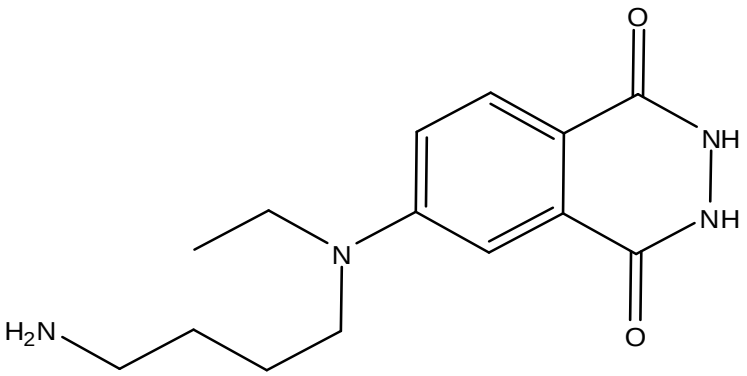
Electronic Supplementary Material (ESI) for Analyst

Supporting Information (EIS)

A Novel Electrochemiluminescence Aptasensor for Protein Based on a Sensitive N-(aminobutyl)-N-ethylisoluminol-functionalized Gold Nanoprobe

*By Ying Chai, Dayong Tian, Jie Gu, Hua Cui**



N-(4-Aminobutyl)-N-ethylisoluminol (ABEI)

Fig. S1 The chemical structure of ABEI.

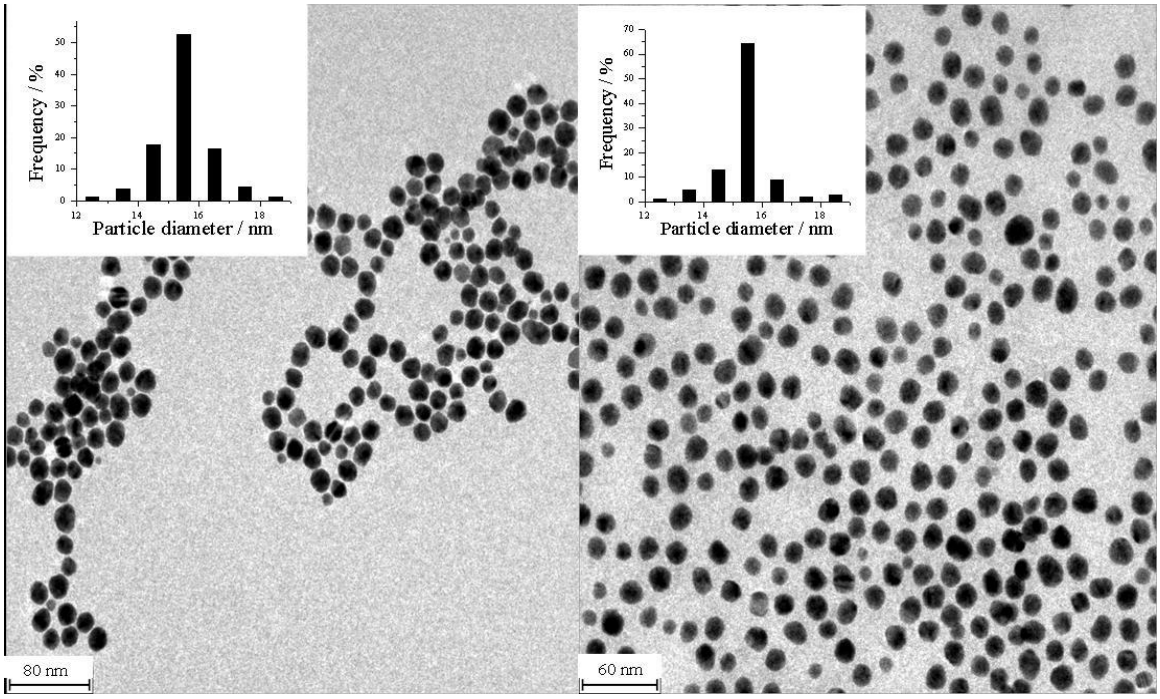


Fig. S2 TEM photos of ABEI-AuNPs before (a) and after (b) labeled with aptamer signal probe.

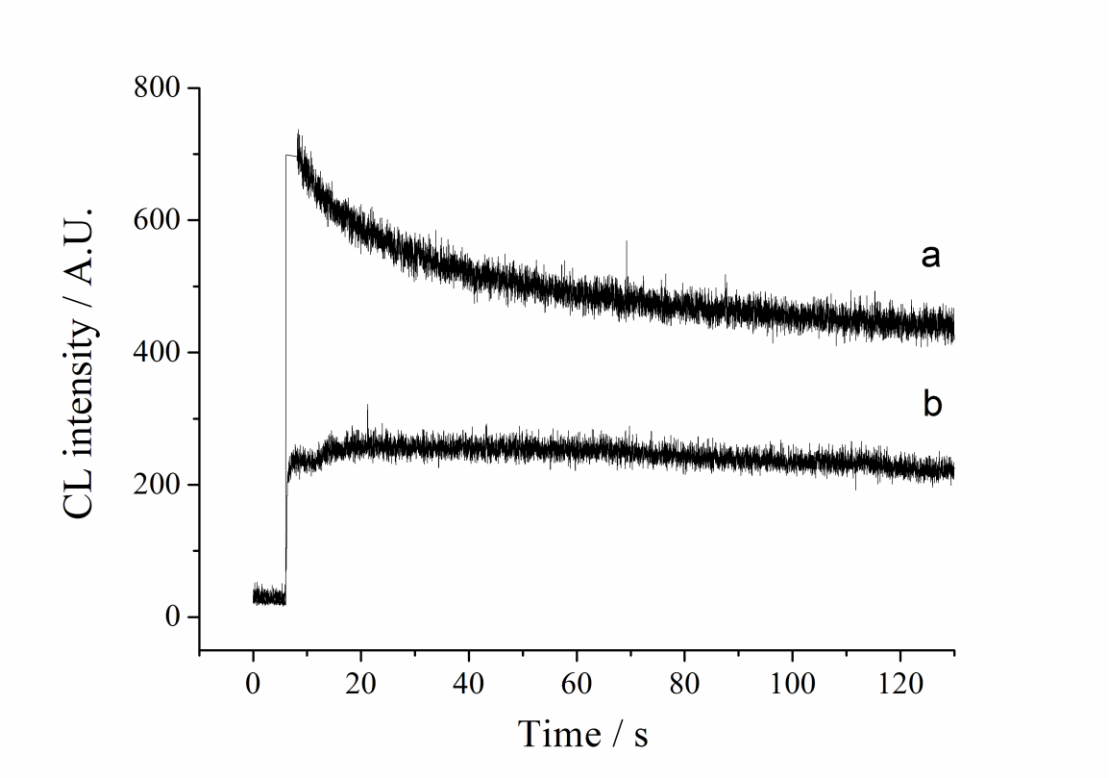


Fig. S3 The results of static CL injection measurement. a) ABEI-AuNPs; b) ABEI-AuNPs labeled aptamer signal probe. ABEI-AuNPs, in 0.1 M NaOH, 500 μL; H_2O_2, 0.1 M, 400 μL.

Preparation of ABEI labeled aptamer signal probe. The ABEI labeled aptamer signal probes were prepared according to the method of the literature [1] with some modification. 200 μL of a 0.1 M imidazole solution (pH 6.8) was added to the 2 OD (about 66 μg of oligonucleotide) 5'-phosphate PDGF-BB binding aptamer for the activation of the phosphate group for 30 min, then 100 μL of 0.1 M EDAC and 200 μL of 1.0×10^{-3} M ABEI were added. The labeling reaction was incubated at room temperature for 12 h with shaking. Finally the solution was transferred to a 5 mL centrifuge tube, and 100 μL (1/5 volumes) of 3 M sodium acetate and 2.0 mL (4 volumes) of 100% cold ethanol was added. The solution was chilled for 8 h at -16 °C

and then centrifuged for 20 min. The precipitate was washed with 200 μL of cold 70% ethanol several times to remove any free ABEI. The ABEI labeled aptamer signal probe was dissolved in TE buffer (10 mM pH 8.0 Tris-HCl buffer containing 1 mM EDTA) and stored at-16 °C for further use.

Reference:

1 M.L. Yang, C.Z. Liu, K.J. Qian, P.G. He, Y.Z. Fang, *Analyst*, 2002, **127**, 1267.