

Electronic supplementary information for RSC Advances

**Enzyme-free ultrasensitive fluorescence detection of
epithelial cell adhesion molecule based on toehold-aided
DNA recycling amplification strategy**

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Native polyacrylamide gel electrophoresis

The different DNA mixed solutions were analyzed in 12% polyacrylamide gel. Electrophoretic analysis was carried out in $1 \times$ TBE by DYCZ-25D electrophoretic apparatus at a constant voltage of 75 V for 100 min. The gel was stained by GelRed.



Fig. S1 native 12% polyacrylamide gel electrophoresis, lane 1: aptamer/strand a + strand b + strand c + strand d + strand e; lane 2: strand b + strand c+ strand d; lane 3: aptamer/strand a + strand b+ strand c+ strand d+ strand e + EpCAM; lane 4: strand b+ strand c + strand d + strand e; lane 5: marker.