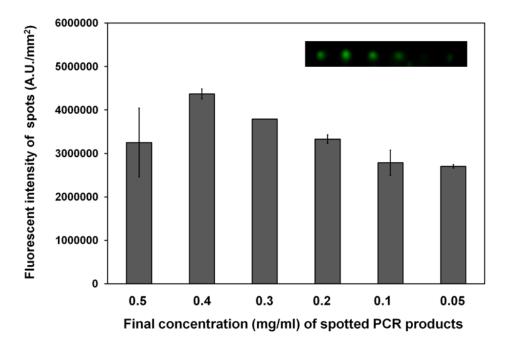
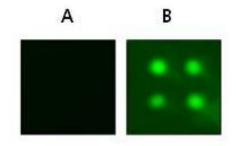
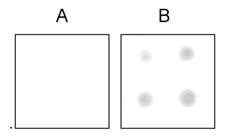
## **Supporting Information**



**Figure S1.** Effect of DNA concentration on the expression level of EGFP. The inset represents the fluorescence image of the in-gel expressed EGFP from the spotted DNA at the concentrations indicated on the X-axis.



**Figure S2.** Electrophoretic wash of the *in situ* arrays. After the in-gel expression of EGFP using unmodified (A) or Ni-NTA-modified (B) agarose, the agarose gel was placed in a horizontal electrophoresis chamber containing Tris–glycine buffer (without SDS) and applied with a constant voltage (50 V) for 15 min.



**Figure S3.** Enzymatic assay of in-gel expressed luciferase. Luciferase-encoding PCR products were immobilized onto a glass slide and expressed in unmodified (A) or Ni-NTA-modified (B) agarose. The gel matrix was washed with PBS buffer after an electrophoretic wash step. And then luciferase assay buffer was supplied onto the top of the agarose surface and the chemiluminescence images were obtained immediately by using Molecular Imager ChemiDoc XRS.