

Development of EGFR Specific DNA Aptamer as EGF Substitute Material

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Serum-containing medium is widely used for mammalian cell culture. However, serum is a complex medium and therefore the reproducibility of cell culture product may not guaranteed. Accordingly, serum-free defined medium is used with medium supplements. But they have shortcomings such as high cost and unstable production. Growth factor in medium play an essential role in cell growth and differentiation, especially epidermal growth factor (EGF) mediates many intracellular signaling pathways by combine with EGF receptor (EGFR). In the present study, we carried out SELEX to select DNA aptamer that specifically combine with EGFR instead of EGF and the affinity between target and aptamer has been evaluated. EGFR specific DNA aptamer is expected to replace the role of EGF in the culture medium. This work was supported by the Technological Innovation R&D Program (S2177590) funded by the Small and Medium Business Administration (SMBA, Korea)"