

In vitro Selection of PDGFR Specific DNA Aptamer for Promotion of Cell Growth

김은실, 차지만, Simranjeet Singh Sekhon, 안지영, 민지호¹, 김양훈[†]

충북대학교 미생물학과; ¹전북대학교 화학공학과

(kyh@chungbuk.ac.kr[†])

Fetal bovine serum (FBS) is the most widely used serum-supplement for the in vitro cell culture, but which is produced expensive and limitation. Furthermore, undefined proteins can lead to unexpected stimulation of cells. The DNA aptamer is oligonucleotide that can bind target molecule. The DNA aptamers, combined with cell growth factor receptor such as platelet-derived growth factor receptor (PDGFR), may promote cell growth. In this study, DNA aptamers generated to specifically bind to PDGFR by using SELEX, real-time PCR and surface plasmon resonance (SPR) spectroscopy. The selected DNA aptamers will measure tyrosine phosphorylation of PDGF receptor by ELISA. This work was supported by the Technological Innovation R&D Program (S2177590) funded by the Small and Medium Business Administration(SMBA, Korea)"