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Abstract

Highly sensitive detection of proteins is essential to biomedical research as well as clinical diagnosis. However, usual detecting methods are complicated operating, time-costing and extensive label preparing. Here, we combined molecular beacon (MB) track mediated DNA walker and nicking enzyme assisted signal amplification method to develop a simple and ultrasensitive malachite green fluorescence biosensor for specific detection cytokine, interferon-γ (IFN-γ). The association of the IFN-γ with the corresponding aptamers of the dsDNA strands leads to free of DNA walker which trigged the generation of DNA track at the help of Nicking endonuclease (Nb.BbvCI).