

Synthesis of protein nanowire for using three-dimensional bioassy

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In order to construct highly efficient diagnostic system, we designed bifunctional protein nanowire. S protein nanowires were genetically engineered and used as diagnostic probes for the antibody detection. Biotin binding peptide (BBP) and antigenic epitope of auto immune disease antigen (IDA) were fusion expressed with S protein, and were formed bifunctional protein nanowire through spontaneous assembly. And we construct 3-dimensional diagnostic system to detect auto IDA. The results showed that the signal intensities and sensitivities of 3-dimensional diagnostic system increased much higher than those of 2-dimensional flat surface.