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Title (English)

Single molecule detection of proteins in microfluidic platform

Title (Swedish)

Abstract

The development of novel method for measuring low concentrations of protein. Two antibody-linked single-stranded oligonucleotides are ligated specifically only when the target protein is present. A circle is formed by connecting the ends of the oligonucleotide to each other. A long molecule complementary to the circle is rolled of and hybridized with a large number of oligonucleotides connected to a fluorescent dye. These big molecules can be detected visually in a confocal microscope, counted with a pattern-recognition program and the initial concentration can be calculated.

Keywords

Micro fluidic platform, protein concentration, protein detection, proximity ligation, rolling circle amplification, single molecule detection

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