

ABSTRACT

POLYMERASE ATTACHMENT TO A CONDUCTIVE CHANNEL

Provided is a device, including a conductive channel and a number of polymerase molecules bound thereto, wherein the number is between one and five and the conductive channel is to detect incorporation of a nucleotide comprising a charge tag into a nascent polynucleotide by the polymerase, and each of the one or more polymerase molecules includes a hexahistidine tag, the conductive channel includes a multivalent nickel-nitrolotriacetic acid complex, and the hexahistidine tag is bound to the multivalent nickel-nitrolotriacetic acid complex. Also provided are a method of attaching a polymerase to a conductive channel of a device and a method of using the device.

[Figure 1]