

Product Information

Hexanucleotide Primers

Product No **H 0268**

Store below 0 °C

Product Description

Hexanucleotide primers (5'-OH dN₆) are a mixture of random synthetic 5'-hydroxyl hexanucleotides or hexamers containing all possible deoxynucleotide sequences. The primers are used to quickly and efficiently prepare radioactive or non-radioactive probes using a DNA polymerase and a suitable DNA template.

Random primers are commonly used in priming single-stranded DNA templates to produce sites for the initiation of DNA synthesis by DNA polymerases. The heterogeneous nature of the random primers ensures that all possible sequences will be represented in the probe mixture. Thus, the labeled probes produced with random primers will be complimentary to the entire sequence of the template.

Product Profile

Primer extension assay: Passes

Primer extension was verified using lambda DNA (*Eco* RI, *Hind* III digest) and M13 (single stranded) as templates. For each template, five reactions (A-E) containing 2 µl DNA template (12.5 ng/µl), 2 µl hexanucleotide primers (12.5 ng/µl), 2 µl 5X nucleotide mix (A-E) and 2 µl water were heated for 10 minutes at 95 °C, then heated for 10 minutes at 37 °C. 2 µl 5X extension mix was then added and the reaction incubated 30 minutes at 37 °C. Extension products were visualized by electrophoresis (12% 19:1 denaturing field gradient polyacrylamide gel).

5X nucleotide mixes:

- A. No dNTP present (Reagent blank)
- B. 1.25 mM dGTP, dCTP and dTTP
- C. 1.25 mM dCTP and dTTP
- D. 1.25 mM dGTP and dTTP
- E. 1.25 mM dGTP and dCTP

5X extension mix: 0.25 M Tris-HCl, pH 7.6, 0.05 M MgCl₂, 5 mM DTT, 0.5 un/µl DNA polymerase I, Klenow fragment, ca. 2 µCi/µl α-³²P-dATP.

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