GENAXXON bioscience
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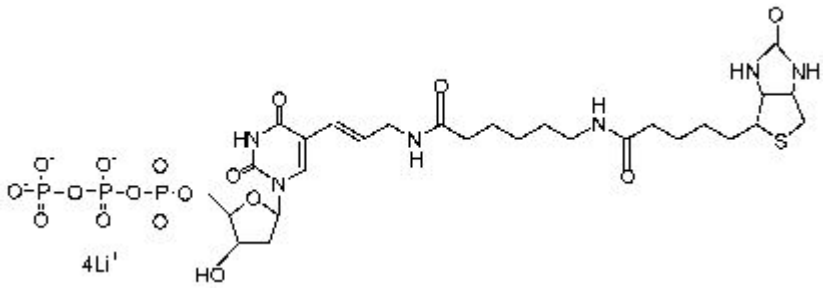
Biotin-11-dUTP

Biotin-11-2'-deoxyuridine-5'-triphosphate, tetralithium salt
Biotin-e-aminocaproyl-[5-(3-aminoallyl)-2'deoxyuridine-5'triphosphate]

Component	Cat#	Amount	Colour code of cap
Biotin-11-dUTP (100µL of 1mM solution)	M3428.0100	100µL	**green**
Biotin-11-dUTP (1mL of 1mM solution)	M3428.1000	1mL	**transparent**



Product description

Biotin-11-dUTP is a widely used compound for non-radioactive DNA labeling. Biotin-11-dUTP can be enzymatically incorporated into DNA via nick-translation, random priming, 3'-end terminal labeling or in the process of PCR. The number "11" is the number of carbon atoms in the backbone of linker between dUTP and biotin. The longer the linker, the more effective is the interaction of biotin with Avidin. On the other side, the shorter the linker, the more effective is the incorporation of dUTP into DNA while PCR reaction.

The length of spacer "11" is optimal for the majority of applications.

Applications

Enzymatic, non-radioactive labelling of DNA in PCR, nick-translation, cDNA synthesis or primer extension reactions.
can be incorporated into DNA using Reverse Transcriptase, *Taq* DNA Polymerase, Klenow Fragment

Storage buffer

10mM Tris-HCl (pH7.5), 1mM EDTA.

Purity

Higher than 96% (by ion-exchange chromatography, TLC, NMR and UV).
Endo-, exodeoxyribonuclease, ribonuclease and phosphatase free.

Stability

Biotin-11-dUTP is stable for more than 12 months if stored at -20°C. Repeated "freeze-thaw" cycles should be avoided.

Storage

Store after delivery at -20°C

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Protocol for Labelling of DNA with Biotin-11-dUTP

Add the following components into 1.5ml microcentrifuge tube:

- DNA template (100-1000ng): 10µL
- random primer in 5X reaction buffer: 10µL
- deionized water : up to 29µL

2. Vortex the tube and spin down in a microcentrifuge for 3-5 sec..
3. Incubate the tube in a boiling water bath for 5-10 min and cool it on ice. Spin down quickly.
4. Add the following components in the same tube:
   - 1mM dATP 5µL
   - 1mM dCTP 5µL
   - 1mM dGTP 5µL
   - 1mM dTTP 2.5µL
   - 1mM Biotin-11-dUTP 2.5µL
   - Klenow-Fragment (exo) (5u) 1µL
5. Shake the tube and spin down in a microcentrifuge for 3-5 sec.
6. Incubate for 1 hour at 37°C. Prolonged incubation at 37°C up to 20 hours increases the yield of labelled DNA.
7. Stop the reaction by the addition of 1µL 0.5M EDTA, pH8.0.
8. The labelled DNA is used directly for hybridization or stored at -20°C. Removal of the unincorporated label is not necessary for most applications. If required, the unincorporated dNTP can be removed by fast centrifugation with CentriPure columns from Genaxxon (CP-0219.Z100) or by selective precipitation of DNA with ethanol in the presence of ammonium acetate.