Product Data Sheet

Product Name: Biotin-16-dCTP
Cat. No.: GB20030

Chemical Properties

Cas. No.			
Formula	$C_{32}H_{53}N_8O_{17}P_3S$ (free acid)	M.Wt	946.7 (free acid)
Solubility		Storage	Store at -20°C or below
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Biotin-16-dCTP		

Background

Biotin-16-dCTP is a modified deoxynucleoside triphosphate (dNTP), serving as a convenient tool for the enzymatic introduction of the biotin moiety into a nucleic acid target of interest. The biotin moiety exhibits a very strong affinity for streptavidin. The strength and specificity of this interaction has been exploited in a variety of biological applications, such as secondary label introduction and affinity isolation. For the biotinylated nucleotides, biotin-16-dCTP and biotin-16-dUTP, strong amplicon formation can be observed with modified nucleotides substituted for 75% of their natural counterparts (i.e. dCTP and dUTP). Compared with biotin-16-dUTP whose yield decreases quickly above 75% substitution, the yield of biotin-16-dCTP decreases at a much higher substitution of ~90%. It turns out that Taq DNA polymerase can incorporate biotin-16-dCTP with greater efficiency than biotin-16-dUTP. Reference: 1. Natasha P, Joyclyn Y. PCR incorporation of modified dNTPs: the substrate properties of biotinylated dNTPs. BioTechniques, 2010, 48(4): 333 - 334.

Caution: Product has not been fully validated for medical applications. For research use only.
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