

Product Data Sheet

Product Name: Cy3-dUTP 1mM Sodium Solution

Cat. No.: GC27620

Chemical Properties

Cas. No. 2365531-99-1 (free acid)

Chemical Name 1-ethyl-2-((1E,3E)-3-(1-(6-(((E)-3-(1-((2R,4S,5R)-4-hydroxy-5-((hydroxy((hydroxy(phosphonooxy)phosphoryl)oxy)phosphoryl)oxy)methyl)tetrahydrofuran-2-yl)-2,4-dioxo-1,2,3,4-tetrahydropyrimidin-5-yl)allyl)amino)-6-oxohexyl)-3,3-dimethyl-5-sulfoindolin-2-ylidene

SMILES O=S(C1=CC=C([N+](CC)=C(C2(C)C)/C=C/C=C(C(C)(C)C3=C4C=CC(S(O)(=O)=O)=C3)/N4CCCCC(NC/C=C/C5=CN([C@H]6C[C@H](O)[C@@H](COP(OP(O)(OP(O)(O)=O)=O)(O)=O)O6)C(NC5=O)=O)=O)C2=C1)([O-])=O

Formula $C_{43}H_{56}N_5O_{21}P_3S_2$ (free acid) M.Wt 1135.97 g/mol (free acid)

Solubility Soluble in DMSO Storage Store at -80°C, protect from light

General For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue Condition ice upon request.

Structure

Background

Cy3-dUTP is a Cyanine3-labeled dUTP fluorescent dye. Cy3 (Sulfo-Cyanine3) is an orange-fluorescent label for protein and nucleic acid ($\lambda_{ex}=554\text{nm}$, $\lambda_{em}=568\text{nm}$). Cy3-dUTP can serve as a substrate for T4 and Taq DNA polymerases, *Escherichia coli* DNA polymerases (whole enzymes and Klenow fragments), reverse transcriptases (from AMV and M-MuLV), and terminal transferases^{[1][2][3]}.

References:

[1] Yu H, Chao J, Patek D, et al. Cyanine dye dUTP analogs for enzymatic labeling of DNA probes. *Nucleic Acids Res.* 1994 Aug 11;22(15):3226-32.

[2] Jiang Y, Li Z S, Jiang F S, et al. Effects of different ingredients of zedoary on gene expression of HSC-T6 cells. *World J Gastroenterol.* 2005 Nov 21;11(43):6780-6.

[3] Gutjahr A, Xu S Y. Engineering nicking enzymes that preferentially nick 5-methylcytosine-modified DNA. *Nucleic Acids Res.* 2014 May;42(9):e77.

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

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