



上海源叶生物科技有限公司
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产品名称: **PSEUDOTHYIMIDINE**
产品别名: **5-Methyl-2'-Deoxypseudouridin**

生物活性:						
Description		Pseudothymidine is a C-nucleoside analog of thymidine.				
In Vitro		Pseudothymidine is a C-nucleoside analog of thymidine[1]. The calculated $\Delta\Delta G^{\circ}_{50}/\text{mod}$ is -0.5 kcal/mol, with a $\Delta T_m/\text{mod}$ of 0.82°C. For the duplexes containing nine dA-T/ψT pairs, the $\Delta T_m/\text{mod}$ is -0.9°C and a $\Delta\Delta G^{\circ}_{50}/\text{mod}$ is +1.1 kcal/mol. The modification of the duplex containing 12 consecutive dA-T/ψT base pairs produces a $\Delta T_m/\text{mod}$ of -0.9°C and a $\Delta\Delta G^{\circ}_{50}/\text{mod}$ of +1.2 kcal/mol[2].				
Solvent&Solubility		In Vitro: DMSO : ≥ 61.17 mg/mL (252.53 mM) * "≥" means soluble, but saturation unknown.				
		Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
			1 mM	4.1283 mL	20.6415 mL	41.2831 mL
			5 mM	0.8257 mL	4.1283 mL	8.2566 mL
			10 mM	0.4128 mL	2.0642 mL	4.1283 mL
*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液, 一旦配成溶液, 请分装保存, 避免反复冻融造成的产品失效。 储备液的保存方式和期限: -80°C, 6 months; -20°C, 1 month。 -80°C 储存时, 请在 6 个月内使用, -20°C 储存时, 请在 1 个月内使用。						
References		[1]. S Lutz, et al. An in vitro screening technique for DNA polymerases that can incorporate modified nucleotides. Pseudo-thymidine as a substrate for thermostable polymerases. Nucleic Acids Res. 1999 Jul 1; 27(13): 2792-2798. [2]. Havemann SA, et al. Incorporation of multiple sequential pseudothymidines by DNA polymerases and their impact on DNA duplex structure. Nucleosides Nucleotides Nucleic Acids. 2008 Mar;27(3):261-78.				
实验参考:						
Kinase Assay		Thermal DNA duplex denaturation studies are performed with templates containing up to twelve consecutive dA residues that are paired with its complement template containing consecutive T or Pseudothymidine (ψT) residues. Experiments are performed in a buffer (45 mM NaCl, 45 mM sodium citrate, pH 8.1, final vol. 1.5 mL) containing template and its complement (1.5 μM of each). Absorbance (260 nm) is monitored over a range of 25.0 to 90.0°C with a change in temperature of 0.5°C/min for five heating cycles. The initial heating cycle is discarded and the T_m is determined by averaging the temperatures of the remaining four cycles. The ΔT_m between similar duplexes is calculated by subtracting the T_m of the duplex containing standard bases from the T_m of the duplex containing C-glycosides (including Pseudothymidine)[2].				
		[1]. S Lutz, et al. An in vitro screening technique for DNA polymerases that can incorporate modified nucleotides. Pseudo-thymidine as a substrate for thermostable polymerases. Nucleic Acids Res. 1999 Jul				



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