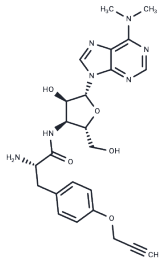
Data Sheet (Cat.No.T12284)

TargetMol

O-Propargyl-Puromycin

Chemical Properties



CAS No. : 1416561-90-4

Formula: C24H29N7O5

Molecular Weight: 495.53

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	O-Propargyl-Puromycin (OP-puro) is a potent protein synthesis inhibitor, a puromycin acetylene analog.
Targets(IC50)	Others
In vitro	O-Propargyl-Puromycin can be used to image and affinity purify nascent proteins in cells and animals. O-Propargyl-Puromycin inhibits protein synthesis in reticulocyte lysates and cultured cells with two to three times less potency than unmodified puromycin. O-Propargyl-Puromycin forms covalent conjugates with nascent polypeptide chains that are rapidly turned over by the proteasome and can be visualized or trapped by copper(I)-catalyzed azide-alkyne cycloaddition reactions.[1]
In vivo	Tissue from uninjected mice showed low nonspecific staining, whereas tissue from O-Propargyl-Puromycin-injected mice showed a specific pattern of O-Propargyl-Puromycin incorporation into nascent proteins. In the small intestine, cells in the crypts and at the base of intestinal villi have the greatest translation capacity, consistent with the high proliferative and secretory activity of these cells. Staining was particularly intense in Paneth cells, which are located near the base of the crypts and are filled with secretory vesicles. Intense O-Propargyl-Puromycin labeling of vesicles in Paneth cells suggests that prematurely terminated O-Propargyl-Puromycin-conjugated secretory proteins translocate into the endoplasmic reticulum (ER) lumen.[1]

Solubility Information

Solubility	DMSO: 257.5 mg/mL (519.65 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (10.09 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.018 mL	10.0902 mL	20.1804 mL
5 mM	0.4036 mL	2.018 mL	4.0361 mL
10 mM	0.2018 mL	1.009 mL	2.018 mL
50 mM	0.0404 mL	0.2018 mL	0.4036 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Liu J, et al. Imaging protein synthesis in cells and tissues with an alkyne analog of puromycin. Proc Natl Acad Sci U S A. 2012 Jan 10;109(2):413-8.