Data Sheet (Cat.No.T15052)

TargetMol

Dapansutrile

Chemical Properties

CAS No. : 54863-37-5

Formula: C4H7NO2S

Molecular Weight: 133.169

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	Dapansutrile is a potent, selective and orally active NLRP3 inflammasome inhibitor, with Anti-inflammatory and analgesic activity.
Targets(IC50)	NOD-like Receptor (NLR),NOD
In vivo	Dapansutrile is a newly developed drug that is safe in humans and inhibits specifically the NLRP3 inflammasome[1].

Solubility Information

Solubility	DMSO: 257.50 mg/mL (1933.63 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: 4.00 mg/mL (30.04 mM),Sonication is recommended. 10% DMSO+90% Saline: 10.00 mg/mL (75.09 mM),Solution. *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	7.5092 mL	37.546 mL	75.092 mL
5 mM	1.5018 mL	7.5092 mL	15.0184 mL
10 mM	0.7509 mL	3.7546 mL	7.5092 mL
50 mM	0.1502 mL	0.7509 mL	1.5018 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

Alba Sánchez-Fernández, Skouras D B , Dinarello C A , et al. OLT1177 (Dapansutrile), a Selective NLRP3 Inflammasome Inhibitor, Ameliorates Experimental Autoimmune Encephalomyelitis Pathogenesis[J]. Frontiers in Immunology, 2019, 10.

Tai G J, Ma Y J, Feng J L, et al.NLRP3 inflammasome-mediated premature immunosenescence drives diabetic vascular aging dependent on the induction of perivascular adipose tissue dysfunction.Cardiovascular Research. 2024: cvae079.

Toldo S, et al. The NLRP3 Inflammasome Inhibitor, Dapansutrile, Reduces Infarct Size and Preserves Contractile Function After Ischemia Reperfusion Injury in the Mouse. J Cardiovasc Pharmacol. 2019 Apr;73(4):215-222.