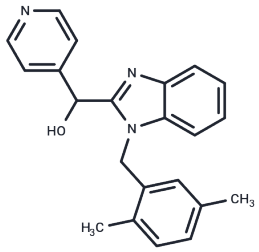
Data Sheet (Cat.No.T61111)

TargetMol

UCB-5307

Chemical Properties



CAS No. : 1515887-44-1

Formula: C22H21N3O

Molecular Weight: 343.42

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	UCB-5307 is a small molecule compound that inhibits TNFR1 signal transduction and downstream function in vitro. The KD of human TNFα is 9 nM. The TNF was directly bound by slow binding kinetics,KD= 6 nM. UCB-5307 can pass through prefabricated hTNF/hTNFR1 complexes.
Targets(IC50)	TNF
In vitro	UCB-5307 exhibits inhibition against wild-type TNF but does not inhibition against L57F TNF. The half-life of UCB-5307 is determined to be 3.3 hours.[1] UCB-5307 disrupts a preexisting complex between hTNF and hTNFR1, penetrating the complex and displacing one of the receptors. Prior exposure of hTNF to UCB-5307 prevents one receptor from binding.[1]

Solubility Information

Solubility	DMSO: 65.8 mg/mL (191.6 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: 2 mg/mL (5.82 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	2.9119 mL	14.5594 mL	29.1189 mL
5 mM	0.5824 mL	2.9119 mL	5.8238 mL
10 mM	0.2912 mL	1.4559 mL	2.9119 mL
50 mM	0.0582 mL	0.2912 mL	0.5824 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

O'Connell J, et al. Small molecules that inhibit TNF signalling by stabilising an asymmetric form of the trimer. Nat Commun. 2019;10(1):5795.