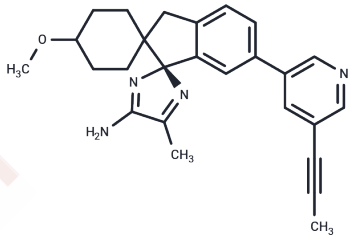
Data Sheet (Cat.No.TQ0238)

TargetMol

Lanabecestat

Chemical Properties



CAS No. : 1383982-64-6

Formula: C26H28N4O

Molecular Weight: 412.53

Storage: Store at low temperature
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	Lanabecestat (AZD3293) is a highly potent and highly permeable, orally active BACE1 inhibitor (Ki: 0.4 nM) that crosses the blood-brain barrier, Lanabecestat can be used for the study of neurological diseases like Alzheimer's disease.
Targets(IC50)	Beta-Secretase,BACE
In vitro	Lanabecestat differentially altered the protein levels of microglia in 5xFAD and APP KI mice[1].
In vivo	Lanabecestat treatment (1 mg/kg; oral gavage; once daily; for 3 weeks) increased the bursting frequency in 4-AP-induced cell models in Bace1-null mice[1].
Cell Research	Cells are incubated with different Lanabecestat concentrations for 5 to 16?h, and the release of sAβPPβ, Aβ1-40, Aβ1-42, or sAβPPα into the medium is analyzed using kits. Cytotoxic effect of Lanabecestat is evaluated in the cell plates using cell proliferation/cytotoxicity kit.
Animal Research	Female 7- to 14-week-old C57BL/6 mice (n=6 per treatment group and time point) receive a vehicle or Lanabecestat solution at 50, 100, or 200 μmol/kg (20, 41, or 82? mg/kg) as a single dose via oral gavage. Mice and guinea pigs are anesthetized 1.5, 2, 3, 4, 6, 8, 16, 24, or 48?h after the (last) administration of vehicle or drug and are then kept under isoflurane anesthesia. Cerebrospinal fluid (CSF) is aspirated from the cisterna magna, and plasma is isolated from blood collected by cardiac puncture into EDTA tubes. The animals are then sacrificed by decapitation, and the brains are dissected into hemispheres.

Solubility Information

Solubility	DMSO: 80 mg/mL (193.93 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: 3.3 mg/mL (8 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4241 mL	12.1203 mL	24.2407 mL
5 mM	0.4848 mL	2.4241 mL	4.8481 mL
10 mM	0.2424 mL	1.212 mL	2.4241 mL
50 mM	0.0485 mL	0.2424 mL	0.4848 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

Yao AY, et al. Bace1 Deletion in the Adult Reverses Epileptiform Activity and Sleep-wake Disturbances in AD Mice. J Neurosci. 2023 Aug 30;43(35):6197-6211.

Eketjäll S, et al. AZD3293: A Novel, Orally Active BACE1 Inhibitor with High Potency and Permeability and Markedly Slow Off-Rate Kinetics. J Alzheimers Dis. 2016;50(4):1109-23.