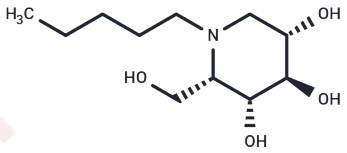
Data Sheet (Cat.No.T40542)

TargetMol

Sinbaglustat

Chemical Properties



CAS No. : 441061-33-2

Formula: C11H23NO4

Molecular Weight: 233.3

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

Biological Description

Description	Sinbaglustat (OGT2378) (OGT2378) is a dual inhibitor of glucose ceramide synthetase (GCS) and non-lysosomal glucose ceramidase (GBA2).Sinbaglustat is an orally administered N-alkyl iminosugar that crosses the blood-brain barrier.Sinbaglustat is used for the treatment of lysosomal storage disorders and for the study of central neurodegenerative disorders associated with lysosomal dysfunction. Sinbaglustat is used for the treatment of lysosomal storage disorders and for the study of lysosomal dysfunction-related central neurodegenerative diseases.
Targets(IC50)	Transferase
In vitro	Sinbaglustat (OGT2378) (20 μM) leads to a remarkable reduction in the synthesis of glucosylceramide by 93% and ganglioside by >95% when compared to untreated MEB4 cells. This reduction occurs without inducing any cytotoxicity or antiproliferative effects.[1] Sinbaglustat is 50-fold more potent in inhibiting GBA2 than GCS.[2]
In vivo	Sinbaglustat (OGT2378) (2500 mg/kg/day; p.o.; in the powdered chow; corresponding to 35-40 mg/mouse/day of Sinbaglustat; Female syngeneic C57BL/6 mice and bearing MEB4 melanoma tumor, 6-8 weeks old bearing MEB4 melanoma tumor) is highly effective in impeding melanoma tumor growth in vivo. The effectiveness of p.o. Sinbaglustat in this murine model suggests that inhibition of glycosphingolipid synthesis is a promising approach to inhibit tumor progression.[1]

Solubility Information

Solubility	DMSO: 46.66 mg/mL (200 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 (21.43 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	4.2863 mL	21.4316 mL	42.8633 mL
5 mM	0.8573 mL	4.2863 mL	8.5727 mL
10 mM	0.4286 mL	2.1432 mL	4.2863 mL
50 mM	0.0857 mL	0.4286 mL	0.8573 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

Michael Weiss, et al. Inhibition of melanoma tumor growth by a novel inhibitor of glucosylceramide synthase. Cancer Res. 2003 Jul 1;63(13):3654-8.

Martine Gehin, et al. Assessment of Target Engagement in a First-in-Human Trial with Sinbaglustat, an Iminosugar to Treat Lysosomal Storage Disorders. Clin Transl Sci. 2021 Mar;14(2):558-567.