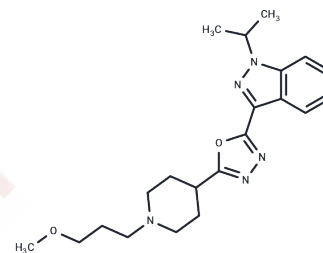


Usmarapride free base

Chemical Properties

CAS No. :	1428862-32-1
Formula:	C ₂₁ H ₂₉ N ₅ O ₂
Molecular Weight:	383.49
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	Usmarapride free base (SUVN-D4010 free base) is a selective and orally active 5-HT ₄ receptor partial agonist, increasing soluble amyloid precursor protein α levels, useful in Alzheimer's disease research.
Targets(IC ₅₀)	5-HT Receptor
In vivo	<p>Methods: Usmarapride free base (1 mg/kg, oral and 1 mg/kg, intravenous) was administered to male beagle dogs to evaluate the pharmacokinetics of Usmarapride free base.</p> <p>Results: Usmarapride free base was rapidly absorbed after oral administration (T_{max} in the range of 0.5-0.75 hours), with oral exposure (AUC_{0-24h} = 711 ± 369 ng·h/mL) and showed a long terminal venous half-life (6.0 ± 1.5 hours), moderate venous clearance (18 ± 6 mL/min/kg) and volume of distribution (5.1 ± 0.6 L/kg), and an absolute oral bioavailability (%F) of 72 ± 11%. [1]</p>

Solubility Information

Solubility	DMSO: 80 mg/mL (208.61 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	<p>10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (8.61 mM), Sonication is recommended.</p> <p><i>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.</i></p>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6076 mL	13.0381 mL	26.0763 mL
5 mM	0.5215 mL	2.6076 mL	5.2153 mL
10 mM	0.2608 mL	1.3038 mL	2.6076 mL
50 mM	0.0522 mL	0.2608 mL	0.5215 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

Nirogi R, et al. Discovery and Preclinical Characterization of Usmarapride (SUVN-D4010): A Potent, Selective 5-HT₄ Receptor Partial Agonist for the Treatment of Cognitive Deficits Associated with Alzheimer's Disease. *J Med Chem.* 2021;64(15):10641-10665.

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