

(1R,2R)-ML-SI3

Chemical Properties

CAS No. : 2418594-00-8

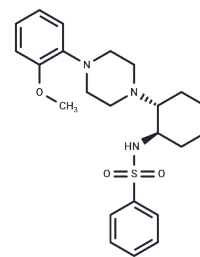
Formula: C₂₃H₃₁N₃O₃S

Molecular Weight: 429.58

Storage: Keep away from direct sunlight, 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	(1R,2R)-ML-SI3 ((-)-trans-ML-SI3) is a selective TRPML1, TRPML2, and TRPML3 inhibitor for the study of neurodegenerative and cardiovascular diseases.
Targets(IC50)	Others, TRP/TRPV Channel
In vitro	(1R,2R)-ML-SI3 is an isomer of ML-SI3 and a potent inhibitor of all three TRPML isoforms. (1R,2R)-ML-SI3 was a potent inhibitor of TRPML1 (IC ₅₀ =1.6 μM), TRPML2 (IC ₅₀ =2.3 μM) and TRPML3 (IC ₅₀ =12.5 μM), (1R,2R)-ML-SI3 was a potent inhibitor of TRPML1 and TRPML2 and a weak inhibitor of TRPML3. [1]

Solubility Information

Solubility	DMSO: 80 mg/mL (186.23 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (7.68 mM), Sonication is recommended. <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>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3279 mL	11.6393 mL	23.2786 mL
5 mM	0.4656 mL	2.3279 mL	4.6557 mL
10 mM	0.2328 mL	1.1639 mL	2.3279 mL
50 mM	0.0466 mL	0.2328 mL	0.4656 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

Leser C, et al. Chemical and pharmacological characterization of the TRPML calcium channel blockers ML-SI1 and ML-SI3. Eur J Med Chem. 2021 Jan 15;210:112966.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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