

Product Data Sheet

Product Name: (rel)-ML-SI3

Cat. No.: GC73075

Chemical Properties

Cas. No. 2108567-79-7

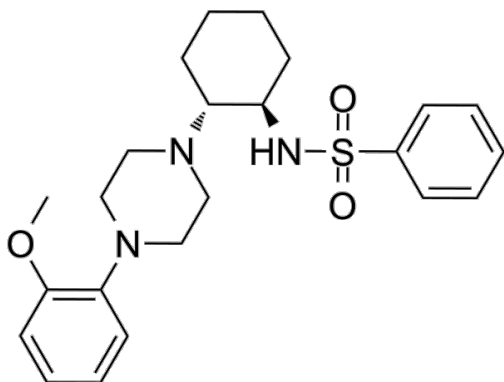
Formula $C_{23}H_{31}N_3O_3S$ M.Wt 429.58

Solubility DMSO : 50 mg/mL (116.39 mM; Need ultrasonic) Storage 4°C, protect from light

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

(rel)-ML-SI3 is one of the active ingredients of ML-SI3 (another component is (cis)-ML-SI3) that

Caution: Product has not been fully validated for medical applications. For research use only.

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targets three isoforms of TRPML. (rel)-ML-SI3 is an inhibitor of TRPML1 and TRPML3 (IC₅₀=3.1 μM/28.5 μM), and a potent activator of TRPML2 (EC₅₀=3.3 μM).

Table: Activation and inhibition of the three subtypes of TRPML by the ML-SI3-type compounds[3]

References:

- [1]. Rühl P, et al. Estradiol analogs attenuate autophagy, cell migration and invasion by direct and selective inhibition of TRPML1, independent of estrogen receptors. Sci Rep. 2021 Apr 15;11(1):8313.
- [2]. 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.
- [3]. Xing Y, et al. Blunting TRPML1 channels protects myocardial ischemia/reperfusion injury by restoring impaired cardiomyocyte autophagy. Basic Res Cardiol. 2022 Apr 7;117(1):20.

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