(rel)-ML-SI3

Cat. No.: HY-139426A

CAS No.: 2108567-79-7

Molecular Formula: $C_{23}H_{31}N_3O_3S$

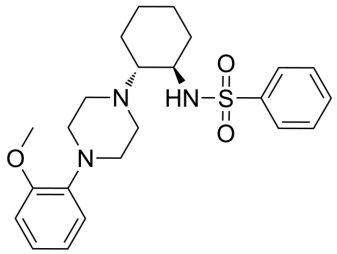
Molecular Weight: 429.58

Target: TRP Channel; Autophagy

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling; Autophagy

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (116.39 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	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

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

(rel)-ML-SI3 is the isomer of ML-SI3 (HY-139426). ML-SI3 is a TRPML Channel Inhibitor. ML-SI3 blocks TRPML1 and TRPML2 with IC_{50}s of 4.7 μM and 1.7 μM, respectively. ML-SI3 prevents lysosomal calcium efflux and blocks downstream TRPML1-mediated induction of autophagy[1][2].

IC_{50} & Target	TRPML1	TRPML2	TRPML3
	3.1 μM (IC_{50})	3.3 μM (EC50)	28.5 μM (IC_{50})

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. [Content Brief]

[2]. 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. [Content Brief]

[3]. 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.

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

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