Proteins



Product Data Sheet

ML365

Cat. No.: HY-12345 CAS No.: 947914-18-3 Molecular Formula: $C_{22}H_{20}N_{2}O_{3}$ Molecular Weight: 360.41

Target: Potassium Channel

Pathway: Membrane Transporter/Ion Channel

Storage: Powder -20°C 3 years

> 4°C 2 years

In solvent -80°C 2 years

> -20°C 1 year

SOLVENT & SOLUBILITY

In Vitro DMSO : ≥ 100 mg/mL (277.46 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	2.7746 mL	13.8731 mL	27.7462 mL
	5 mM	0.5549 mL	2.7746 mL	5.5492 mL
	10 mM	0.2775 mL	1.3873 mL	2.7746 mL

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

In Vivo

- 1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 3 mg/mL (8.32 mM); Clear solution
- 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 3 mg/mL (8.32 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	ML365 is a selective two-pore domain potassium channel KCNK3/TASK1 inhibitor, with an IC ₅₀ of 4 nM. ML365 acts as a pharmacological tool that can be used to examine the specific roles of TASK1 channels ^[1] .	
IC ₅₀ & Target	IC50: 4 nM (TASK1/KCNK3), 390 nM (TASK3/KCNK9) ^[1]	
In Vitro	ML365 blocks TASK1 channels in both the thallium influx fluorescent assay (IC $_{50}$ = 4 nM) and an automated electrophysiology assay (IC $_{50}$ = 16 nM) $^{[1]}$. ML365 displays little or no inhibition at 30 μ M of more distantly related potassium channels, Kir2.1, potassium voltage-gated channel, KQT-like subfamily, member 2 (KCNQ2), and human ether-a go-go-related gene (hERG) $^{[1]}$.	

ML365 does not exhibit acute toxicity in cell-based assays at concentrations up to 30 μ M $^{[1]}$.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Acta Pharmacol Sin. 2021 Aug 2.
- J Am Heart Assoc. 2017 Sep 9;6(9). pii: e006465.
- Graduate School of Arts and Sciences. Columbia University. 2017 Jun.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Zou B, et al. ML365: Development of Bis-Amides as Selective Inhibitors of the KCNK3/TASK1 Two Pore Potassium Channel. Probe Reports from the NIH Molecular Libraries Program [Internet].

 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$

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