TWIK-1/TREK-1-IN-3

Cat. No.: HY-149538

CAS No.: 1440532-33-1

Molecular Formula: $C_{19}H_{27}F_3N_2O_2$

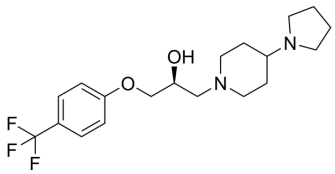
Molecular Weight: 372.43

Target: Potassium Channel

Pathway: Membrane Transporter/Ion Channel

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (67.13 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6851 mL	13.4253 mL	26.8507 mL
5 mM	0.5370 mL	2.6851 mL	5.3701 mL
10 mM	0.2685 mL	1.3425 mL	2.6851 mL

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

BIOLOGICAL ACTIVITY

Description

TWIK-1/TREK-1-IN-3 (compound 2h) is an inhibitor of TWIK-related potassium channel (Potassium Channel) TREK-1. TREK-1 contains a two-pore domain potassium (K2p) channel that dimerizes into TREK-1 homodimer and TWIK-1/TREK-1 heterodimer, and is an important antidepressant target. TWIK-1/TREK-1-IN-3 targets TREK-1 homodimer and TWIK-1/TREK-1 heterodimer with IC_{50}s of 9.74 μM and 16.5 μM, respectively, and has antidepressant-like effects[1].

IC_{50} & Target

IC50: 9.74 μM (TREK-1/TREK-1), 16.5 μM (TWIK-1/TREK-1)[1]

REFERENCES

[1]. Lee EH, et al. Novel potent blockers for TWIK-1/TREK-1 heterodimers as potential antidepressants. Biomed Pharmacother. 2023 Sep;165:115139.. .

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

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