KV2 channel inhibitor-1

Cat. No.: HY-44153

CAS No.: 689297-68-5

Molecular Formula: $C_{20}H_{17}ClN_4OS$

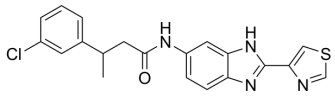
Molecular Weight: 396.89

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 : 250 mg/mL (629.90 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5196 mL	12.5979 mL	25.1959 mL
	5 mM	0.5039 mL	2.5196 mL	5.0392 mL
	10 mM	0.2520 mL	1.2598 mL	2.5196 mL

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

BIOLOGICAL ACTIVITY

Description

KV2 channel inhibitor-1 is a selective K_V2 channel inhibitor with IC_{50}s of 0.2 μM and 0.41 μM for $K_V2.1$ and $K_V2.2$, respectively. KV2 channel inhibitor-1 possesses good selectivity over $K_V1.2$ (IC_{50}>10 μM). KV2 channel inhibitor-1 is >10-fold selective over Na_V channels and other K_V channels and displays weak activity on Ca_V channels[1].

IC_{50} & Target

IC50: 0.2 μM (KV2.1), 0.41 μM (KV2.2), 12.1 μM (KV1.2), 9.5 μM (KV1.5), >20 μM (KV3.2), 2.9 μM (KV11.1), 6.6 μM (CaV1.2), >10 μM (CaV2.1), >10 μM (CaV2.2), 5.7 μM (CaV2.3), >10 μM (NaV1.5), 8 μM (NaV1.7)[1]

In Vitro

KV2 channel inhibitor-1 (compound A1; 0.3, 1, 3 μM; 0-3000s) inhibits the K_V current in rat insulinoma INS-1 cells. KV2 channel inhibitor-1 blocks INS-1 K_V current an average of 71% at 0.3 μM and 84% at 3 μM[1].

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

REFERENCES

[1]. James Herrington, et al. Identification of novel and selective Kv2 channel inhibitors. Mol Pharmacol. 2011 Dec;80(6):959-64.

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

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