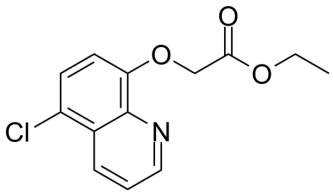
A2793

Cat. No.:	HY-137563
CAS No.:	88349-90-0
Molecular Formula:	$C_{13}H_{12}ClNO_3$
Molecular Weight:	265.69
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (376.38 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.7638 mL	18.8189 mL	37.6378 mL
	5 mM	0.7528 mL	3.7638 mL	7.5276 mL
	10 mM	0.3764 mL	1.8819 mL	3.7638 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: ≥ 2.5 mg/mL (9.41 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.41 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

A2793 is an efficient dual TWIK-related acid-sensitive K^+ channel (TASK)-1/TRESK inhibitor, with an IC_{50} of 6.8 μM for mTRESK. A2764 is more selective for TRESK, and it only moderately influences TREK-1 and TALK-1[1].

IC_{50} & Target

IC50: 6.8 μM (mTRESK)[1].

In Vitro

A2793 (100 μM) inhibits the unstimulated channel by 43.0±8.9% (n=5) while after ionomycin activation the reduction of the TRESK current is 85.5±2.9% (n=5)[1].
A2793 inhibits TASK-1 (100 μM, 53.4±13,5%, n=5), while A2764 is more selective for TRESK, it only moderately influencesTREK-1 and TALK-1[1].
A2793 may be considered as a tool to discriminate between the resting and activated channels in heterologous expression systems, and to block TRESK activated by calcineurin in the native cells which do not express TASK-1[1].

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

REFERENCES

[1]. Miklós Lengyel, et al. Chemically Modified Derivatives of the Activator Compound Cloxyquin Exert Inhibitory Effect on TRESK (K 2P 18.1) Background Potassium Channel. Mol Pharmacol. 2019 Jun;95(6):652-660.

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