

SAK3

Chemical Properties

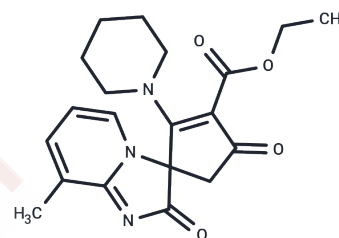
CAS No. : 1256269-87-0

Formula: C₂₀H₂₃N₃O₄

Molecular Weight: 369.41

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	SAK3 is a novel modulator of nAChR activity that enhances T-type voltage-gated Ca ²⁺ channel (T-VGCC) activity, and has potentiating effects on both Cav3.1 and Cav3.3 T-type Ca ²⁺ channel currents. SAK3 is neuroprotective against scopolamine-induced cholinergic dysfunction in human neuroblastoma SH-SY5Y cells. SAK3 is used for the study of memory deficits and Alzheimer's disease. SAK3 can be used to study memory deficits and Alzheimer's disease.
Targets(IC50)	Calcium Channel, AChR
In vitro	In Neuro2A cells overexpressing Cav3.1 or Cav3.3, SAK3 (0.1 nM; 270 s) rapidly increases Ca ²⁺ currents[2].
In vivo	In Cav3.1 knockout (KO) mice animal model, SAK3 (0.5 mg/kg; administered p.o.) significantly increased acetylcholine (ACh) release in the CA1 region, peaking at 20 minutes after oral administration[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.707 mL	13.5351 mL	27.0702 mL
5 mM	0.5414 mL	2.707 mL	5.414 mL
10 mM	0.2707 mL	1.3535 mL	2.707 mL
50 mM	0.0541 mL	0.2707 mL	0.5414 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Yasushi Yabuki, et al. Pharmacological properties of SAK3, a novel T-type voltage-gated Ca²⁺ channel enhancer. *Neuropharmacology*. 2017 May 1;117:1-13.
- Jing Xu, et al. T-Type Ca²⁺ Enhancer SAK3 Activates CaMKII and Proteasome Activities in Lewy Body Dementia Mice Model. *Int J Mol Sci*. 2021 Jun 8;22(12):6185.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481