

VGSC blocker-1

Chemical Properties

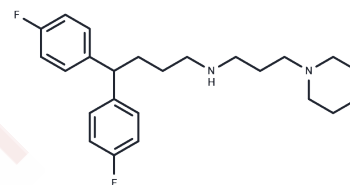
CAS No. : 2230472-55-4

Formula: C₂₄H₃₂F₂N₂

Molecular Weight: 386.52

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	VGSC blocker-1 is a powerful small molecule that serves as a blocker for the neonatal isoform of the VGSC subtype known as Nav1.5 (nNav1.5). It effectively blocks INa peak currents by 34.9% at a concentration of 1 μM, and demonstrates a 0.3% inhibition of cell invasion at the same concentration in the MDA-MB-231 human breast cancer cell line, without compromising cell viability.
Targets(IC50)	Others,Sodium Channel
In vitro	VGSC blocker 1 (compound 1), at concentrations ranging from 1.0 to 10 μM, effectively inhibits the human breast cancer cell line MDA-MB-231[1]. Specifically, this compound reduces cell viability and impacts cell invasion within this cell line. Experimental results demonstrate that VGSC blocker 1 decreases INa peak currents by 34.9% at a concentration of 1 μM, alongside a marginal 0.3% inhibition of cell invasion at the same concentration. These effects surpass the efficacy thresholds previously established at 0.1 μM for significant nNav1.5 current blockade and 1 μM for cell invasion inhibition, underscoring the compound's potent biological activity against MDA-MB-231 cells.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5872 mL	12.9359 mL	25.8719 mL
5 mM	0.5174 mL	2.5872 mL	5.1744 mL
10 mM	0.2587 mL	1.2936 mL	2.5872 mL
50 mM	0.0517 mL	0.2587 mL	0.5174 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

Dutta S, et al. Discovery and evaluation of nNav1.5 sodium channel blockers with potent cell invasion inhibitory activity in breast cancer cells. Bioorg Med Chem. 2018;26(9):2428-2436.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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