

NS19504

Chemical Properties

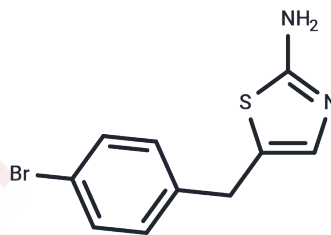
CAS No. : 327062-46-4

Formula: C₁₀H₉BrN₂S

Molecular Weight: 269.16

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	NS19504 is an activator of Ca ²⁺ -activated K ⁺ channel with EC ₅₀ of 11.0 μM. NS19504 shows relaxing effect on bladder smooth muscle spontaneous phasic contractions[1].
Targets(IC ₅₀)	Potassium Channel
In vitro	NS19504, which activated the BK channel with an EC ₅₀ value of 11.0 μM. Hit validation was performed using high-throughput electrophysiology (QPatch), and further characterization was achieved in manual whole-cell and inside-out patch-clamp studies in human embryonic kidney 293 cells expressing hBK channels: NS19504 caused distinct activation from a concentration of 0.3 and 10 M NS19504 left-shifted the voltage activation curve by 60 mV. Furthermore, whole-cell recording showed that NS19504 activated BK channels in native smooth muscle cells from guinea pig urinary bladder. In guinea pig urinary bladder strips, NS19504 (1 M) reduced spontaneous phasic contractions, an effect that was significantly inhibited by the specific BK channel blocker iberiotoxin. In contrast, NS19504 (1 M) only modestly inhibited nerve-evoked contractions and had no effect on contractions induced by a high K(+) concentration consistent with a K(+) channel-mediated action.

Solubility Information

Solubility	DMSO: 249 mg/mL (925.1 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (18.58 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7153 mL	18.5763 mL	37.1526 mL
5 mM	0.7431 mL	3.7153 mL	7.4305 mL
10 mM	0.3715 mL	1.8576 mL	3.7153 mL
50 mM	0.0743 mL	0.3715 mL	0.7431 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

Nausch B, et al. NS19504: a novel BK channel activator with relaxing effect on bladder smooth muscle spontaneous phasic contractions. J Pharmacol Exp Ther. 2014 Sep;350(3):520-30.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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