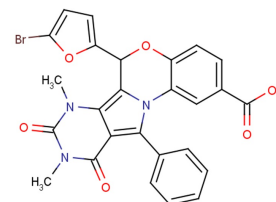


BPO-27 (racemate)

Chemical Properties

CAS No.:	1314873-02-3
Formula:	C ₂₆ H ₁₈ BrN ₃ O ₆
Molecular Weight:	548.34
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	BPO-27 racemate is an effective inhibitor of CFTR (IC ₅₀ : 8 nM).
Targets(IC ₅₀)	Others: None
In vitro	The R enantiomer of BPO-27 inhibits CFTR chloride conductance (IC ₅₀ : 4 nM), while S enantiomer is inactive. In vitro metabolic stability in hepatic microsomes shows both enantiomers as stable, with less than 5% metabolism in 4 h [1]. (R)-BPO-27 binds near the canonical ATP binding site. Whole-cell patch-clamp studies show linear CFTR currents with a voltage-independent (R)-BPO-27 block mechanism. At a concentration of (R)-BPO-27 that inhibits CFTR chloride current by 50%, the EC ₅₀ for ATP activation of CFTR increases from 0.27 to 1.77 mM [2].
In vivo	Following bolus intraperitoneal administration of BPO-27 in mice, serum (R)-1 decays with t _{1/2} ≈ 1.6 h and gives sustained therapeutic concentrations in the kidney [1].

Solubility Information

Solubility	DMSO: 6 mg/mL (10.94 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.824 mL	9.118 mL	18.237 mL
5 mM	0.365 mL	1.824 mL	3.647 mL
10 mM	0.182 mL	0.912 mL	1.824 mL
50 mM	0.036 mL	0.182 mL	0.365 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

- Snyder DS, et al. Absolute Configuration And Biological Properties of Enantiomers of CFTR Inhibitor BPO-27. ACS Med Chem Lett. 2013 May 9;4(5):456-459.
- Kim Y, et al. Benzopyrimido-pyrrolo-oxazine-dione (R)-BPO-27 Inhibits CFTR Chloride Channel Gating by Competition with ATP. Mol Pharmacol. 2015 Oct;88(4):689-96.

Inhibitors · Natural Compounds · Compound Libraries

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