

ASP8302

Chemical Properties

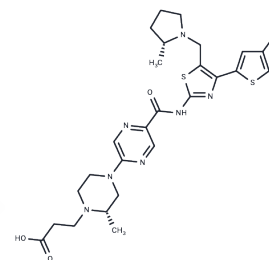
CAS No. : 1839583-42-4

Formula: C₂₆H₃₂ClN₇O₃S₂

Molecular Weight: 590.16

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	ASP8302 is an oral, highly selective muscarinic M3 receptor positive allosteric modulator (M3-PAM) that binds specifically to the Thr230 site on the M3 receptor, enhancing receptor activation induced by endogenous acetylcholine (ACh) and increasing bladder smooth muscle contraction to improve urinary dysfunction.
Targets(IC50)	AChR
In vitro	ASP8302 (0.1-1 μM) enhances carbachol-induced intracellular Ca ²⁺ mobilization in CHO-K1 cells expressing rat muscarinic receptors in a concentration-dependent manner [1].
In vivo	ASP8302 (0.1-1 mg/kg; intravenous injection) reduces residual urine volume and improves voiding efficiency in male SD rats with voiding dysfunction induced by midodrine and atropine [2]. ASP8302 (1-3 mg/kg; intravenous injection) reduces residual urine volume and improves voiding efficiency in female Wistar rats with voiding dysfunction caused by bladder outlet obstruction [2].

Solubility Information

Solubility	DMSO: 80 mg/mL (135.56 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6945 mL	8.4723 mL	16.9446 mL
5 mM	0.3389 mL	1.6945 mL	3.3889 mL
10 mM	0.1694 mL	0.8472 mL	1.6945 mL
50 mM	0.0339 mL	0.1694 mL	0.3389 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

Okimoto R, et al. Potentiation of Muscarinic M3 Receptor Activation through a New Allosteric Site with a Novel Positive Allosteric Modulator ASP8302. *J Pharmacol Exp Ther*. 2021 Oct;379(1):64-73.

Okimoto R, et al. Muscarinic M3 positive allosteric modulator ASP8302 enhances bladder contraction and improves voiding dysfunction in rats. *Low Urin Tract Symptoms*. 2022 Jul;14(4):289-300.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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