

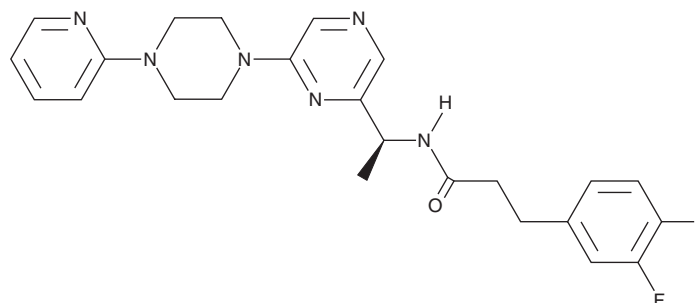
# PRODUCT INFORMATION



## B-973B

Item No. 38790

**CAS Registry No.:** 2244989-34-0  
**Formal Name:** 3,4-difluoro-N-[(1S)-1-[6-[4-(2-pyridinyl)-1-piperazinyl]-2-pyrazinyl]ethyl]-benzenepropanamide  
**Synonym:** (-)-(S)-B-973B  
**MF:** C<sub>24</sub>H<sub>26</sub>F<sub>2</sub>N<sub>6</sub>O  
**FW:** 452.5  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

B-973B is supplied as a solid. A stock solution may be made by dissolving the B-973B in the solvent of choice, which should be purged with an inert gas. B-973B is soluble in the organic solvent methanol.

### Description

B-973B is an allosteric agonist and positive allosteric modulator (ago-PAM) of  $\alpha 7$  nicotinic acetylcholine receptors (nAChRs).<sup>1,2</sup> It enhances ACh-induced activation in a two-electrode voltage-clamp assay using *Xenopus* oocytes expressing the human  $\alpha 7$  nAChR when used at a concentration of 10  $\mu$ M.<sup>2</sup> B-973B (10 mg/kg) decreases paw edema and induces antinociception in the first and second phase of the formalin test in a mouse model of inflammatory pain. It also inhibits tau aggregation induced by seeding with insoluble human tau isolated from a patient with Alzheimer's disease in primary rat neurons in a concentration-dependent manner.<sup>3</sup>

### References

1. Post-Munson, D.J., Pieschl, R.L., Molski, T.F., *et al.* B-973, a novel piperazine positive allosteric modulator of the  $\alpha 7$  nicotinic acetylcholine receptor. *Eur. J. Pharmacol.* **799**, 16-25 (2017).
2. Garai, S., Raja, K.S., Papke, R.L., *et al.* B-973, a novel  $\alpha 7$  nAChR Ago-PAM: Racemic and asymmetric synthesis, electrophysiological studies, and *in vivo* evaluation. *ACS Med. Chem. Lett.* **9(11)**, 1144-1148 (2018).
3. Gibbons, G.S., Gould, H., Lee, V.M.-Y., *et al.* Identification of small molecules and related targets that modulate tau pathology in a seeded primary neuron model. *J. Biol. Chem.* **299(7)**, 104876 (2023).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/21/2023

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM