

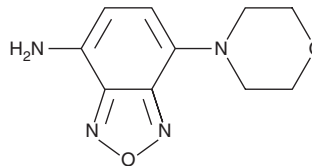
PRODUCT INFORMATION



δ -Secretase Inhibitor 11

Item No. 38524

CAS Registry No.: 842964-18-5
Formal Name: 7-(4-morpholinyl)-2,1,3-benzoxadiazol-4-amine
MF: C₁₀H₁₂N₄O₂
FW: 220.2
Purity: \geq 95%
UV/Vis.: λ_{max} : 234 nm
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

δ -Secretase inhibitor 11 is supplied as a solid. A stock solution may be made by dissolving the δ -secretase inhibitor 11 in the solvent of choice, which should be purged with an inert gas. δ -Secretase inhibitor 11 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of δ -secretase inhibitor 11 in ethanol is approximately 2 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of δ -secretase inhibitor 11 can be prepared by directly dissolving the solid in aqueous buffers. δ -Secretase inhibitor 11 is slightly soluble in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

δ -Secretase inhibitor 11 is an inhibitor of δ -secretase (IC_{50} = 0.7 μ M), also known as asparagine endopeptidase (AEP) and legumain.¹ It is selective for δ -secretase over cathepsin S, cathepsin L, caspase-3, and caspase-8 (IC_{50} s = >200, >200, 31.86, and 86.71 μ M, respectively). δ -Secretase inhibitor 11 inhibits δ -secretase in Pala B-lymphoblastoid cells (IC_{50} = 0.8 μ M). It inhibits glucose-oxygen deprivation-induced cell death in primary mouse neurons when used at a concentration of 2 μ M. *In vivo*, δ -secretase inhibitor 11 (10 mg/kg per day) inhibits brain δ -secretase in wild-type mice and transgenic mice expressing human tau^{P301S}. It reduces the number of cortical and hippocampal tau N368-positive neurons, restores synaptic dysfunction, and improves spatial learning and memory in transgenic mice expressing human tau^{P301S}. δ -Secretase inhibitor 11 (10 mg/kg) reduces hippocampal amyloid- β (A β) deposition and attenuates cognitive deficits in the 5XFAD transgenic mouse model of Alzheimer's disease.

Reference

1. Zhang, Z., Obianyo, O., Dall, E., *et al.* Inhibition of delta-secretase improves cognitive functions in mouse models of Alzheimer's disease. *Nat. Commun.* **8**, 14740 (2017).

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, 08/07/2023

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