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- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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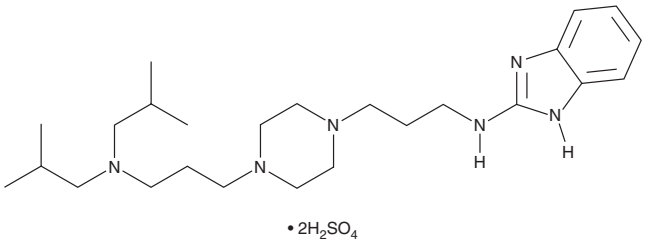
PRODUCT INFORMATION

Ezeprogind (sulfate)

Item No. 37401

CAS Registry No.: 1616671-13-6
Formal Name: N^4-1H-benzimidazol-2-yl-N^1,N^1-*bis*(2-methylpropyl)-1,4-piperazinedipropanamine, disulfate
MF: $C_{25}H_{44}N_6 \bullet 2H_2SO_4$
FW: 624.8
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

Ezeprogind (sulfate) is supplied as a solid. A stock solution may be made by dissolving the ezeprogind (sulfate) in the solvent of choice, which should be purged with an inert gas. Ezeprogind (sulfate) is soluble in DMSO and methanol.

Description

Ezeprogind is an inhibitor of amyloid precursor protein (APP) proteolysis.[1] It reduces the proteolysis of full-length APP to $A\beta_{1-38}$ (IC_{50} = 5 µM) and $A\beta_{1-40}$ (IC_{50} = 2 µM) in SH-SY5Y cells expressing APP. Ezeprogind induces APP intracellular domain (AICD) expression at a doubling (C_2) value of 0.8 µM without inducing cytotoxicity in wildtype SH-SY5Y cells at a 50% cytotoxic concentration (CC_{50}) value of 30 µM. It inhibits cell death, dendritic network degradation, and loss of synapse integrity induced by $A\beta_{1-42}$ in primary rat cortical neurons when used at concentrations of 10, 50, and 100 nM.[2] Ezeprogind (10, 50, and 100 nM) decreases $A\beta_{1-42}$-induced Il-β and Il-6 secretion from, and the activation levels of, microglia in primary rat cortical neurons. It prevents and reverses the decline in spatial alternation retention in the Y-maze special alternation task in the SAMP8 mouse model of rapid aging and dementia when administered at a dose of 3 mg/kg per day in drinking water for eight months and at the same dose for six and four months, respectively. It decreases the number of hippocampal activated microglia in SAMP8 mice treated for eight and six months but not four months. Ezeprogind also reduces the proliferation of chloroquine-resistant *P. falciparum* (IC_{50} = 40.6 nM).[3]

References

1. Melnyk, P., Vingtdeux, V., Burlet, S., *et al.* Chloroquine and chloroquinoline derivatives as models for the design of modulators of amyloid peptide precursor metabolism. *ACS Chem. Neurosci.* **6(4)**, 559-569 (2015).
2. Callizot, N., Estrella, C., Burlet, S., *et al.* AZP2006, a new promising treatment for Alzheimer's and related diseases. *Sci. Rep.* **11(1)**, 16806 (2021).
3. Ryckebusch, A., Deprez-Poulain, R., Debreu-Fontaine, M.-A., *et al.* Synthesis and antimalarial evaluation of new 1,4-bis(3-aminopropyl)piperazine derivatives. *Bioorg. Med. Chem. Lett.* **13(21)**, 3783-3787 (2003).

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