

Product Data Sheet

Product Name: Davunetide (acetate)

Cat. No.: GC49913

Chemical Properties

Cas. No.

SMILES O=C([C@H]1N(CCC1)C([C@H](C)NC([C@@H](N)CC(N)=O)=O)=O)N[C@@H](C(C)C)C(N[C@@H](CO)C(N[C@@H]([C@@H](C)CC)C(N2[C@@H](CCC2)C(N[C@H](C(O)=O)CCC(N)=O)=O)=O)=O.O.CC(O)=O

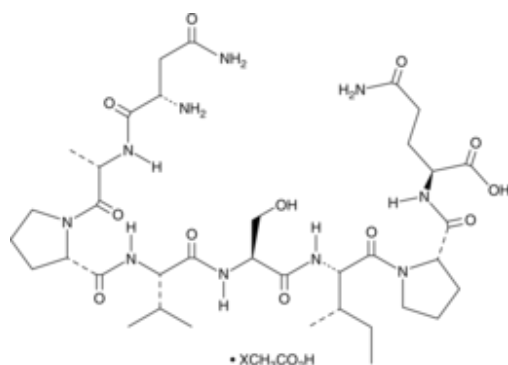
Formula C₃₆H₆₀N₁₀O₁₂ • XC₂H₄O₂ M.Wt 824.9

Solubility DMF: 1 mg/ml, DMSO: 1 mg/ml, Ethanol: insol, PBS (pH 7.2): 10 mg/ml
Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Davunetide is a neuroprotective peptide derived from activity-dependent neuroprotective protein (ADNP).¹ It promotes tubulin assembly in a cell-free assay when used at a concentration of 1 fM.² Davunetide (1 fM) protects against cytotoxicity induced by tetrodotoxin, a peptide derived from amyloid-β (Aβ), or zinc in isolated neonatal cerebral cortical cells.^{1,2} Intravitreal administration of davunetide (4 μl of a 100 μg/ml solution) inhibits increases in cleaved caspase-3 and decreases in

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Bcl-2 levels in retina isolated from streptozotocin-induced diabetic rats.³ It improves survival in a superoxide dismutase 1 mutant (SOD1^{G93A}) transgenic mouse model of amyotrophic lateral sclerosis (ALS) when administered at 10 µg/animal.⁴ Davunetide prevents decreases in brain choline acetyltransferase (ChAT) activity and prevents memory deficits in the Morris water maze in an *ApoE*^{-/-} mouse model of neurodegeneration.¹

1. Bassan, M., Zamostiano, R., Davidson, A., et al. Complete sequence of a novel protein containing a femtomolar-activity-dependent neuroprotective peptide. *J. Neurochem.* 72(3)1283-1293(1999)
2. Divinski, I., Mittelman, L., and Gozes, I. A femtomolar acting octapeptide interacts with tubulin and protects astrocytes against zinc intoxication. *J. Biol. Chem.* 279(27)28531-28538(2004)
3. Scuderi, S., D'Amico, A.G., Castorina, A., et al. Davunetide (NAP) protects the retina against early diabetic injury by reducing apoptotic death. *J. Mol. Neurosci.* 54(3)395-404(2014)
4. Jouroukhin, Y., Ostritsky, R., Assaf, Y., et al. NAP (davunetide) modifies disease progression in a mouse model of severe neurodegeneration: Protection against impairments in axonal transport. *Neurobiol. Dis.* 56:79-94(2013)

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