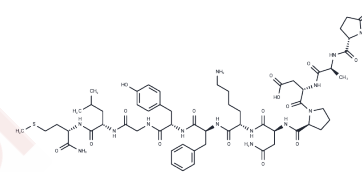


Physalaemin

Chemical Properties

CAS No. :	2507-24-6
Formula:	C ₅₈ H ₈₄ N ₁₄ O ₁₆ S
Molecular Weight:	1265.45
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Physalaemin is a non-mammalian tachykinin.
Targets(IC50)	Neurokinin receptor
In vitro	Physalaemin (PHY), a non-mammalian tachykinin, binds selectively to neurokinin-1 (NK1) receptor with high affinity. Both the aqueous and lipid-induced conformations of PHY have been studied using two-dimensional nuclear magnetic resonance techniques. In water PHY prefers to be in an extended conformation and that in the presence of perdeuterated dodecylphosphocholine micelles, a membrane model system, a helical conformation is observed from Pro4 to the C-terminus. Comparison of the structures of PHY and other NK ligands along with structure activity studies reported on these peptide ligands suggests that helical backbone structural motif is necessary for the binding of these NK ligands to the various NK receptors. Furthermore, consensus in the structures of these ligands suggests that these ligands must be binding along the highly hydrophobic face of the helix that contains the important hydrophobic residues, Phe7, Leu10, and Met11, that are highly conserved in most of the ligands.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.7902 mL	3.9512 mL	7.9023 mL
5 mM	0.158 mL	0.7902 mL	1.5805 mL
10 mM	0.079 mL	0.3951 mL	0.7902 mL
50 mM	0.0158 mL	0.079 mL	0.158 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

Grace CR, et al. Solution conformation of non-mammalian tachykinin physalaemin in lipid micelles by nuclear magnetic resonance. *Biopolymers*. 2011;96(3):252-9.

Kobayashi J, Hydrolytic cleavage of pyroglutamyl-peptide bond. V. selective removal of pyroglutamic acid from biologically active pyroglutamylpeptides in high concentrations of aqueous methanesulfonic acid. *Chem Pharm Bull (Tokyo)*. 2006 Jun;54(6):827-31.

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