Data Sheet (Cat.No.T19518)

TargetMol
A DRUG SCREENING EXPERT

Physalaemin

Chemical Properties

CAS No.:	2507-24-6
Formula:	C58H84N14O16S
Molecular Weight:	1265.44
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Physalaemin is a non-mammalian tachykinin.
Targets(IC_{50})	Neurokinin-1 (NK1) receptor: None
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 ofPHYand 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.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.79 mL	3.951 mL	7.902 mL
5 mM	0.158 mL	0.79 mL	1.58 mL
10 mM	0.079 mL	0.395 mL	0.79 mL
50 mM	0.016 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. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

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

2. 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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