

Substance P

Chemical Properties

CAS No. : 33507-63-0

Formula: C₆₃H₉₈N₁₈O₁₃S

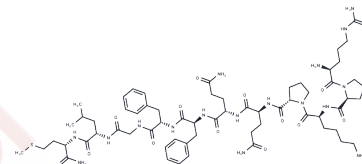
Molecular Weight: 1347.63

Storage:

Keep away from moisture, Store at low temperature,
Keep away from direct sunlight

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Substance P (Neurokinin P) (SP) is an undecapeptide (a peptide composed of a chain of 11 amino acid residues) member of the tachykinin neuropeptide family.
Targets(IC50)	Endogenous Metabolite, Neurokinin receptor
In vitro	The process involves the desensitization and resensitization of neuropeptide substance P (SP) through the neurokinin 1 receptor (NK1-R), which may relate to the endocytosis and recycling of NK1-R. Both SP and NK1-R are internalized into clathrin-immunoreactive vesicles and subsequently segregated into distinct compartments. Initially, SP remains intact on the cell surface and in early endosomes but gradually degrades in perinuclear vesicles. SP triggers the clathrin-dependent internalization of NK1-R. Within acidified endosomes, the SP/NK1-R complex disassociates, leading to the degradation of SP while NK1-R is recycled back to the cell surface. This mechanism of SP-induced NK1-R internalization is observed in transfected epithelial cells[1].

Solubility Information

Solubility	DMSO: 10 mM, Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (1.48 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.742 mL	3.7102 mL	7.4204 mL
5 mM	0.1484 mL	0.742 mL	1.4841 mL
10 mM	0.0742 mL	0.371 mL	0.742 mL
50 mM	0.0148 mL	0.0742 mL	0.1484 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

Grady EF, et al. Delineation of the endocytic pathway of substance P and its seven-transmembrane domain NK1 receptor. Mol Biol Cell. 1995 May;6(5):509-24.

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