

PRODUCT INFORMATION



Spantide I (trifluoroacetate salt)

Item No. 43079

Formal Name: D-arginyl-L-prolyl-L-lysyl-L-prolyl-L-glutamyl-L-glutamyl-D-tryptophyl-L-phenylalanyl-D-tryptophyl-L-leucyl-L-leucinamide, trifluoroacetate salt

Synonyms: [Arg¹,Trp^{7,9},Leu¹¹] Substance P, DADTL, SPA I

Peptide Sequence: rPKPQQwFwLL-NH₂

MF: C₇₅H₁₀₈N₂₀O₁₃ • XCF₃COOH

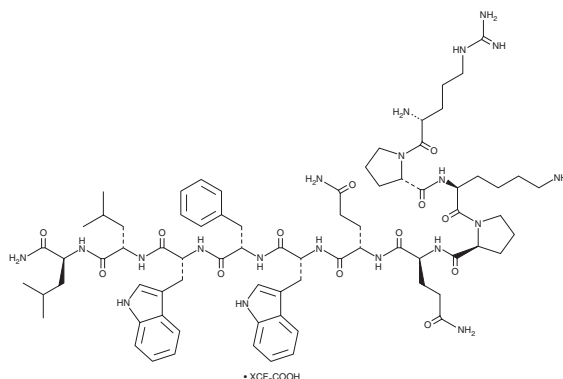
FW: 1,497.8

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

Spantide I (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the spantide I (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Spantide I (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of spantide I (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. Spantide I (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Spantide I is a peptide antagonist of the neurokinin-1 (NK₁) receptor (K_i = 177.83 nM).¹ It is selective for the NK₁ receptor over NK₂ and NK₃ receptors (K_is = 5,000 and >10,000 nM, respectively). Spantide I induces histamine release from isolated rat mast cells (EC₅₀ = 2.5 μM).² It inhibits neurokinin B-induced contractions in isolated and perfused guinea pig taenia coli when used at a concentration of 10 μM. Intrathecal administration of spantide I (2 μg/animal) increases the latency to withdrawal in the tail-flick- or hot plate test but also induces hindlimb paralysis in rats.³ Spantide I (36 μg/animal per day for five days) decreases corneal *P. aeruginosa* levels and polymorphonuclear cell infiltration, reduces corneal IL-1β levels, and increases corneal IL-10 levels in a mouse model of corneal *P. aeruginosa* infection.⁴

References

- McLean, S., Ganong, A., Seymour, P.A., et al. *J. Pharmacol. Exp. Ther.* **267**(1), 472-479 (1993).
- Håkanson, R., Leander, S., Asano, N., et al. *Regul. Pept.* **31**(1), 75-82 (1990).
- Post, C. and Paulsson, I. *Neurosci. Lett.* **57**(2), 159-164 (1985).
- Hazlett, L.D., McClellan, S.A., Barrett, R.P., et al. *Invest. Ophthalmol. Vis. Sci.* **48**(2), 797-807 (2006).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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