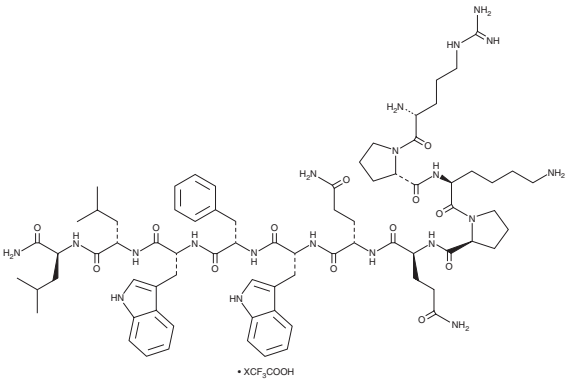
PRODUCT INFORMATION

Spantide I (trifluoroacetate salt)

Item No. 43079



Formal Name:	D-arginyl-L-prolyl-L-lysyl-L-prolyl-L-glutaminyl-L-glutaminyl-D-tryptophyl-L-phenylalanyl-D-tryptophyl-L-leucyl-L-leucinamide, trifluoroacetate salt
Synonyms:	[Arg^{1},Trp^{7,9},Leu^{11}] Substance P, DADTL, SPA I
Peptide Sequence:	rPKPQQwFwLL-NH_2
MF:	$C_{75}H_{108}N_{20}O_{13} \bullet XCF_3COOH$
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 (NK_1) receptor (K_i = 177.83 nM).[1] It is selective for the NK_1 receptor over NK_2 and NK_3 receptors (K_is = 5,000 and >10,000 nM, respectively). Spantide I induces histamine release from isolated rat mast cells (EC_{50} = 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

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

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