PRODUCT INFORMATION

Neuropeptide SF (mouse, rat) (trifluoroacetate salt)

Item No. 45480

Formal Name: (S)-2-((S)-1-(L-seryl-L-leucyl-L-alanyl-L-alanyl) pyrrolidine-2-carboxamido)-N1-((S)-1-(((S)-1-amino-1-oxo-3-phenylpropan-2-yl)amino)-5-guanidino-1-oxopentan-2-yl)pentanediamide, trifluoroacetate salt

Synonyms: NPSF, Ser-Leu-Ala-Ala-Pro-Gln-Arg-Phe-NH_2, SLAAPQRFa

Peptide Sequence: SLAAPQRF-NH_2

MF: $C_{40}H_{65}N_{13}O_{10} \bullet XCF_3COOH$

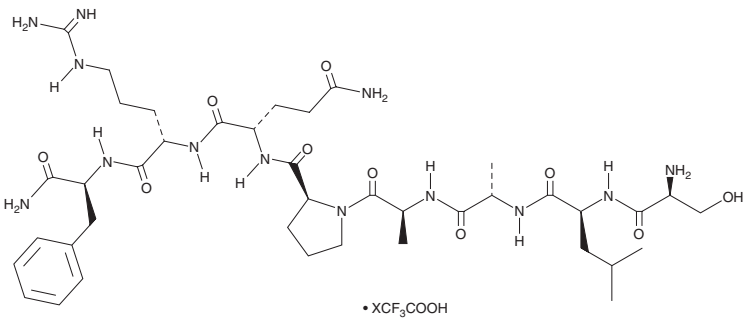
FW: 888.0

Purity: ≥95%

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

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

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 neuropeptide SF (mouse, rat) (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. Neuropeptide SF (mouse, rat) (trifluoroacetate salt) is sparingly soluble in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Neuropeptide SF is an endogenous peptide and agonist of the neuropeptide FF (NPFF) receptor.[1] It is expressed in the mouse and rat spinal cord.[2] It binds to $NPFF_1$ and $NPFF_2$ receptors (K_is = 32 and 20 nM, respectively, for the human receptors) and reduces forskolin-induced cAMP production in CHO cells expressing human $NPFF_1$ and $NPFF_2$ receptors (EC_{50}s = 876 and 222 nM, respectively).[3] NPSF (0.06 nmol/animal) enhances the antinociceptive effect of morphine in the tail-flick and paw pressure tests in rats and restores antinociceptive effects in the same tests in morphine-tolerant rats.[2]

References

1. Jhamandas, K., Milne, B., Sutak, M., *et al.* Facilitation of spinal morphine analgesia in normal and morphine tolerant animals by neuropeptide SF and related peptides. *Peptides* **27(5)**, 953-963 (2006).
2. Bonnard, E., Burlet-Schiltz, O., Francés, B., *et al.* Identification of neuropeptide FF-related peptides in rodent spinal cord. *Peptides* **22(7)**, 1085-1092 (2001).
3. Mollereau, C., Mazarguil, H., Marcus, D., *et al.* Pharmacological characterization of human $NPFF_1$ and $NPFF_2$ receptors expressed in CHO cells by using NPY Y_1 receptor antagonists. *Eur. J. Pharmacol.* **451(3)**, 245-256 (2002).

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