PRODUCT INFORMATION

Neuromedin N (trifluoroacetate salt)

Item No. 24707

Formal Name: L-lysyl-L-isoleucyl-L-prolyl-L-tyrosyl-L-isoleucyl-L-leucine, trifluoroacetate salt
Synonym: NMN
MF: $C_{38}H_{63}N_7O_8 \bullet XCF_3COOH$
FW: 745.9
Purity: ≥95%
Supplied as: A lyophilized powder
Storage: -20°C
Stability: ≥4 years

H—Lys—Ile—Pro—Tyr—Ile—Leu—OH

$\bullet XCF_3COOH$

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Neuromedin N (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the neuromedin N (trifluoroacetate salt) in water. The solubility of neuromedin N (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Neuromedin N is a neurotensin-like hexapeptide that is synthesized from the same precursor as neurotensin.[1] It is highly expressed in the brain but is also expressed in the gastrointestinal system and adrenal glands. It competitively inhibits neurotensin binding to rat brain synaptic membranes and has increased potency in the presence of the peptidase inhibitor bestatin (IC_{50}s = 16.7 and 3 nM, respectively).[2] Neuromedin N (10 pM) increases the phagocytic function of isolated murine peritoneal macrophages and increases chemotaxis two-fold compared with control, an effect that is blocked by the calcium-channel blocker ryanodine.[3] It induces hypotension in rats and contraction of isolated guinea pig ileum.[4] Neuromedin N (0.05 - 5 µg, i.c.v.) also elicits hypothermia in rats in a dose- and time-dependent manner, which is potentiated by bestatin (Item No. 21217).[5] Neuromedin N is more potent than neurotensin in stimulating spontaneous motor activity and increasing dopamine metabolism in several brain regions following injection into the rat ventral tegmental area but is less potent than neurotensin when injected into the nucleus accumbens.[6]

References

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4. Minamino, N., Kangawa, K., and Matsuo, H. Neuromedin N: A novel neurotensin-like peptide identified in porcine spinal cord. Biochem. *Biophys. Res. Commun.* **122(2)**, 542-549 (1984).
5. Dubuc, I., Nouel, D., Coquerel, A., *et al.* Hypothermic effect of neuromedin N in mice and its potentiation by peptidase inhibitors. *Eur. J. Pharmacol.* **151(1)**, 117-121 (1988).
6. Kalivas, P.W., Richardson-Carlson, R., and Duffy, P. Neuromedin N mimics the actions of neurotensin in the ventral tegmental area but not in the nucleus accumbens. *J. Pharmacol. Exp. Ther.* **238(3)**, 1126-1131 (1986).

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