

PRODUCT INFORMATION



Neuromedin B (trifluoroacetate salt)

Item No. 24543

Formal Name: glycyl-L-asparaginyl-L-leucyl-L-tryptophyl-L-alanyl-L-threonylglycyl-L-histidyl-L-phenylalanyl-L-methioninamide, 2,2,2-trifluoroacetate

Synonym: NMB $\text{H-Gly-Asn-Leu-Trp-Ala-Thr-Gly-His-Phe-Met-NH}_2$

MF: $\text{C}_{52}\text{H}_{73}\text{N}_{15}\text{O}_{12}\text{S} \cdot \text{XCF}_3\text{COOH}$ • XCF_3COOH

FW: 1,132.3

Purity: $\geq 95\%$

Supplied as: A lyophilized powder

Storage: -20°C

Stability: ≥ 4 years

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

Laboratory Procedures

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

Description

NMB is a peptide agonist of the NMB receptor ($K_i = 7.4$ nM in NCI-H1299 small cell lung cancer cells expressing the human receptor).¹ It displays similar affinity for frog $[\text{Phe}^{13}]$ bombesin receptors ($K_i = 11$ nM) and lower affinities for human gastrin-releasing peptide receptor and bombesin receptor subtype 3 ($K_s = 440$ and $4,800$ nM, respectively). Intrathecal administration of NMB (0.1 - 1 nmol) induces dose-dependent itching behavior in mice.² NMB (50 μg , s.c.) reduces serum thyroid stimulating hormone (TSH) by 30% in mice indicating a role in pituitary-thyroid axis function.³ In rodents, NMB is also involved in mediating stress and fear responses, thermoregulation, and can stimulate the contraction of the uterus and gastrointestinal smooth muscle.⁴

References

1. Ryan, R.R., Katsuno, T., Mantey, S.A., *et al.* Comparative pharmacology of the nonpeptide neuromedin B receptor antagonist PD 168368. *J. Pharmacol. Exp. Ther.* **290**(3), 1202-1211 (1999).
2. Sukhtankar, D.D. and Ko, M.C. Physiological function of gastrin-releasing peptide and neuromedin B receptors in regulating itch scratching behavior in the spinal cord of mice. *PLoS One* **8**(6):e67422, (2013).
3. Oliveira, K.J., Ortega-Carvalho, T.M., Cabanelas, A., *et al.* Disruption of neuromedin B receptor gene results in dysregulation of the pituitary-thyroid axis. *J. Mol. Endocrinol.* **36**(1), 73-80 (2006).
4. Gonzalez, N., Moody, T.W., Igarashi, H., *et al.* Bombesin-related peptides and their receptors: Recent advances in their role in physiology and disease states. *Curr. Opin. Endocrinol. Diabetes Obes.* **15**(1), 58-64 (2008).

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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