

Neuromedin U, rat

Cat. No.:	HY-P1238
CAS No.:	117505-80-3
Molecular Formula:	C ₁₂₄ H ₁₈₀ N ₃₄ O ₃₁
Molecular Weight:	2642.97
Sequence:	Tyr-Lys-Val-Asn-Glu-Tyr-Gln-Gly-Pro-Val-Ala-Pro-Ser-Gly-Gly-Phe-Phe-Leu-Phe-Arg-Pro-Arg-Asn-NH ₂
Sequence Shortening:	YKVNEYQGPVAPSGGFFLFRPRN-NH ₂
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Neuromedin U, rat is a 23-amino acid brain-gut peptide. Neuromedin U (NMU), through its cognate receptor NMUR2 in the central nervous system, regulates several important physiological functions, including energy balance, stress response, and nociception.
IC ₅₀ & Target	NMUR2 ^[1]
In Vitro	To establish an electrochemiluminescent (ECL) binding assay for NMUR2 receptor, the peptide Neuromedin U (NMU-23) is labeled at the N terminus with Ru(bpy) ₂ ²⁺ ₃ and allowed to bind to the human NMUR2 receptor in the cell membranes immobilized on the electrode on the bottom of each assay plate. Upon application of an electric current, the receptor-bound Ru(bpy) ₂ ²⁺ ₃ -ligand undergoes an oxidation-reduction cycle in the presence of a coreactant tripropylamine and emits light. Signal is only generated when the Ru(bpy) ₂ ²⁺ ₃ label is in proximity to the electrode, thus discriminating the bound label from the unbound and enabling a no wash, homogenous assay format. The ECL-based NMUR2 binding assay is used to screen our corporate compound collection. Approximately 670,000 compounds with diverse structures are tested at 10 μM for their ability to displace the binding of 0.5 nM Ru(bpy) ₂ ²⁺ ₃ -NMU-23 to human NMUR2 receptors. From competition binding experiments, the K _i values for NMU-23 is determined to be 4.7 nM ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Liu JJ, et al. Discovery and pharmacological characterization of a small-molecule antagonist at neuromedin U receptor NMUR2. J Pharmacol Exp Ther. 2009 Jul;330(1):268-75.

Caution: Product has not been fully validated for medical applications. For research use only.

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