Product Data Sheet

Product Name: Neuromedin U (rat)
Cat. No.: GC13026

Chemical Properties

Cas. No.	117505-80-3
Chemical Name	(2S,3Z,5S,6Z,8S,9Z,11S,12Z,14S)-2-amino-14-((Z)-(((S,Z)-1-(((S,Z)-1-((2-((S)-2-((Z)-(((S,Z)-1-(((S)-1-((S)-2-((1Z,3S,4Z,7Z,10Z,12S,13Z,15S,16Z,18S,19Z,21S,22Z,24S)-29-amino-12,15,21-tribenzyl-24-((S)-2-((Z)-(((S,Z)-1-(((S)-1,4-dihydroxy-1,4-diiminobutan-2
SMILES	CC(C[C@@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/C/N=C(O)/C/N=C(O)/[C@](/N=C(O)/[C@]1([H])CCCN1C([C@](/N=C(O)/[C@](/N=C(O)/[C@]2([H])CCCN2C(C/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](N)([H])CC3=CC=C(O)C=C3)([H])
Formula	$C_{124}H_{180}N_{34}O_{31}$	M.Wt	2642.97
Solubility	Soluble to 1 mg/ml in Water	Storage	Desiccate at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Neuromedin U (rat)		

Background

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.

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+3 and allowed to bind to the human NMUR2 receptor in the cell membranes immobilized on the

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

electrode on the bottom of each assay plate. Upon application of an electric current, the receptor-bound Ru(bpy)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+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+3-NMU-23 to human NMUR2 receptors. From competition binding experiments, the Ki values for NMU-23 is determined to be 4.7 nM[1].

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.