Product Data Sheet

Product Name: CGRP 8-37 (rat)
Cat. No.: GC10927

Chemical Properties

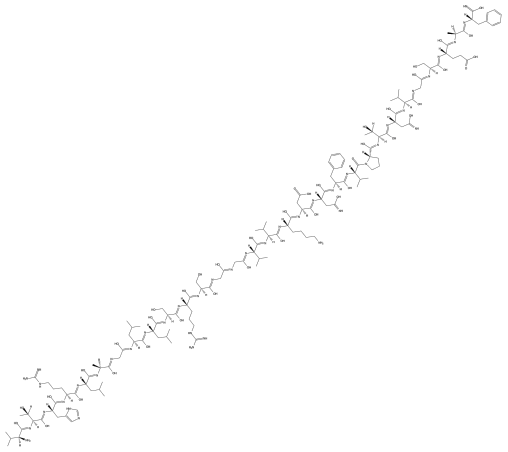
Cas. No.	129121-73-9
Chemical Name	(3S,4Z,6S,7Z,9S,10Z,12S,13Z,16Z,19Z,21S,22Z,24S,25Z,27S,28Z,30S,31Z,33S,34Z,37Z,39S,40Z,42S,43Z,45S,46Z,48S,49Z,51S,52Z,54S)-48-((1H-imidazol-5-yl)methyl)-54-amino-6-(4-aminobutyl)-3-((Z)-(((S,Z)-1-(((S,Z)-1-(((S)-1-((S)-2-((1Z,3S,4Z,6S,7Z,9S,10Z,13Z,15S,
SMILES	CC(C[C@@](/N=C(O)/C/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](N)([H])C(C)C)([H])[C@@](O)([H])C)([H])CC1=CN=CN1)([H])CCCNC(N)=N)([H])CC(C)C)([H])C)([H])/C(O)=N/[C@@](/C(O)=N/[C@@](/C(O)=N/[C@@](/C(O)=N/[C@@](/C(O)=N/C/C(O

Formula	$C_{138}H_{224}N_{42}O_{41}$	M.Wt	3127.51
Solubility	Soluble to 1 mg/ml in sterile water	Storage	-20°C, protect from light

General tips: For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C 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



Protocol

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Animal experiment: Rats: Adult male Sprague Dawley rats are given a spinal hemisection or a sham surgery at the T13 spinal segment. An externally accessible PE-10 intrathecal catheter that terminated at T13 is used for drug delivery. Animals are allowed to recover for 4 weeks at which time the hemisected animals displayed mechanical and thermal allodynia bilaterally, in both forelimbs and hindlimbs. CGRP-(8-37) is delivered just prior to a testing session in 1, 5, 10, or 50 nM doses in artificial cerebral spinal fluid in 10 mL volumes[1].

References:

[1]. Bennett AD, et al. Alleviation of mechanical and thermal allodynia by CGRP(8-37) in a rodent model of chroniccentral pain. Pain. 2000 May;86(1-2):163-75.
[2]. Yu LC, et al. The calcitonin gene-related peptide antagonist CGRP8-37 increases the latency to withdrawalresponses in rats. Brain Res. 1994 Aug 8;653(1-2):223-30.

Background

Rat CGRP-(8-37) (VTHRLAGLLSRSGGVVKDNFVPTNVGSEAF) is a highly selective CGRP receptor antagonist.

CGRP-(8-37) is a truncated version of calcitonin gene-related peptide (CGRP) that binds to the CGRP receptor with similar affinity but does not activate the receptor[1].

CGRP-(8-37) is effective in alleviating mechanical and thermal allodynia in a dose-dependent manner. The 50 nM dose is most efficacious for both forelimb and hindlimb responses. The period of efficacy is 10 min to onset for a duration of 20 min. Post-drug washout responses are not statistically significant compared to pre-drug responses[1]. Intrathecal administration of 5 nmol or 10 nmol of CGRP-(8-37), but not 1 nmol, induces a significant increase in hindpaw withdrawal latency. Intrathecal administration of CGRP-(8-37) not only reverses the SP-induced decrease in latency to both withdrawal responses but also mediates a significant increase in response latency compared to basal levels[2].

References:
[1]. Bennett AD, et al. Alleviation of mechanical and thermal allodynia by CGRP(8-37) in a rodent

model of chroniccentral pain. Pain. 2000 May;86(1-2):163-75.
[2]. Yu LC, et al. The calcitonin gene-related peptide antagonist CGRP8-37 increases the latency to withdrawalresponses in rats. Brain Res. 1994 Aug 8;653(1-2):223-30.