
Product Data Sheet

Product Name: Calcitonin Gene Related Peptide (CGRP) (83-119), rat

Cat. No.: GC34396

Chemical Properties

Cas. No.

SMILES Ser-Cys-Asn-Thr-Ala-Thr-Cys-Val-Thr-His-Arg-Leu-Ala-Gly-Leu-Leu-Ser-Arg-Ser-Gly-Gly-Val-Val-Lys-Asp-Asn-Phe-Val-Pro-Thr-Asn-Val-Gly-Ser-Glu-Ala-Phe-NH₂
(Disulfide bridge: Cys₂-Cys₇)

Formula C₁₆₂H₂₆₂N₅₀O₅₂S₂ M.Wt 3806.3

Solubility Soluble in DMSO Storage Store at -20°C

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

Animal experiment:

Rat[3] Male Wistar rats, weighing 150-250 g, are used throughout this study. As soon as the righting reflex is lost, the initial (t = 0) measurement of cheek thickness (in mm) is made with digital calipers, the intra-oral injection given and then cheek thickness measured again at 5, 15 and 30 min, 1, 2, 3, 4, 6 and 24 h, following agonists (CGRP, etc) or saline injections. Cheek thickness in λ-carrageenan (CG)-injected animals is measured at 0, 15, 30 min, 1, 2, 3, 4, 5, 6 and 24 h. Paw thickness (in mm) is obtained similarly, using the calipers at the time points indicated for cheek oedema, with the only difference being that the animals are not anesthetized for local (intraplantar) injections[3].

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

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References:

- [1]. S. Ghatta, et al. Calcitonin gene-related peptide: Understanding its role. Educational Forum. 20.6.2004.
- [2]. Eftekhari S, et al. Calcitonin gene-related peptide (CGRP) and its receptor components in human and rat spinal trigeminal nucleus and spinal cord at C1-level. BMC Neurosci. 2011 Nov 10;12:112.
- [3]. Queiroz BFG, et al. Calcitonin-gene related peptide is a potent inducer of oedema in rat orofacial tissue. Neuropeptides. 2018 Apr;68:43-48.

Background

Calcitonin Gene Related Peptide (CGRP) (83-119), rat is a 37 amino acid calcitonin family

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of neuropeptide, acts through calcitonin receptor-like receptor (CRLR).

Calcitonin Gene Related Peptide (CGRP) (83-119), rat belongs to the calcitonin family of neuropeptides which also includes adrenomedullin, amylin, calcitonin, intermedin and calcitonin receptor-stimulating peptide. Calcitonin Gene Related Peptide (CGRP) has two isoforms (α CGRP and β CGRP), and acts through calcitonin receptor-like receptor (CRLR) [1]. Calcitonin Gene Related Peptide (CGRP) plays a key role in migraine pathophysiology and is associated with activation of the trigeminovascular system. CGRP possibly acts postjunctionally in these areas putatively involved in primary headaches[2].

CGRP is a potent inducer of oedema in rat orofacial tissue. CGRP (100 μ L; 8-33 pmol) induces a rapidly developing (5-15?min) and long-lasting (6?h), dose-dependent oedema in the rat cheek. CGRP induces a smaller oedematogenic effect in the rat hind paw also blocked by the CGRP antagonist. CGRP (16 pmol) potentiates the oedema induced by co-injected substance P (3.7 nmol)[3].

[1]. S. Ghatta, et al. Calcitonin gene-related peptide: Understanding its role. Educational Forum. 20.6.2004. [2]. Eftekhari S, et al. Calcitonin gene-related peptide (CGRP) and its receptor components in human and rat spinal trigeminal nucleus and spinal cord at C1-level. BMC Neurosci. 2011 Nov 10;12:112. [3]. Queiroz BFG, et al. Calcitonin-gene related peptide is a potent inducer of oedema in rat orofacial tissue. Neuropeptides. 2018 Apr;68:43-48.

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