

Product Specification Sheet

Human CGRP peptide

Cat. # CGRP15-P-5 Human CGRP (1-37) Peptide **SIZE:** 500 ug

The calcitonin family of bioactive peptides comprises of **calcitonin**, **amylin**, two calcitonin-gene related peptides (**CGRP1**, and **CGRP2**) and adrenomedullin (**ADM**). **Calcitonin** is 32 aa peptide found in the parafollicular "C" cells of the thyroid in mammals. It is also found in a number of non-mammals. It regulated the mineral (calcium and phosphate) balance. Calcitonin causes hypercalcemia by acting as an inhibitor of osteoclast induced bone resorption. **CGRP** is a 37-aa peptide produced by tissue specific processing of the calcitonin gene. Calcitonin is the major product in the thyroid, whereas CGRP is the major product in neural tissues. CGRP is a potent cardiovascular agent. It has structural similarity with amylin. CGRP is found in two isoforms (CGRP-I and CGRP-II) that differs only by 3 amino acids. The calcitonin family peptides probably act through G-protein coupled membrane receptors. Recently, a homolog of calcitonin receptor, **CRLR** (calcitonin-receptor-like receptor human 461 aa; rat/mouse 463 aa) was identified. It is now shown that CRLR can function as either a CGRP receptor or an ADM receptor, depending upon which members of a new family of proteins called receptor activity modifying proteins (**RAMP1-3**) are expressed.

FUNCTION: CGRP induces vasodilation. It dilates a variety of vessels including the coronary, cerebral and systemic vasculature. Its abundance in the CNS also points toward a neurotransmitter or neuromodulator role.

SUBCELLULAR LOCATION: Secreted.

SIMILARITY: Belongs to the calcitonin family.

Protein name Calcitonin gene-related peptide 2 [Precursor]

Synonyms Calcitonin gene-related peptide II; CGRP-II; Beta-type CGRP

Gene name Name: **CALCB** ; **Synonyms:** **CALC2**

Source of Antigen

Human CGRP (37-aa) was synthesized and purified by hplc (>99%),

Sequence 1-37 aa	Ala-Cys-Asp-Thr-Ala-Thr-Cys-Val-Thr-His-Arg-Leu-Ala-Gly-Leu-Leu-Ser-Arg-Ser-Gly-Gly-Val-Val-Lys-Asn-Asn-Phe-Val-Pro-Thr-Asn-Val-Gly-Ser-Lys-Ala-Phe-NH2
Purity	>95%
Mol Wt	3789.4
Notes	Disulfide bridge
Solubility	Water

Form & Storage

Human CGRP is supplied in 500 ug/vial lyophilized form. Powder can be dissolved in water to prepare at stock of 1mg/ml. Working dilutions can be in the required buffer.

Store at -20oC (liquid or powder). Do not store working dilutions of the peptide.

Powder is stable for up to 6 months at -20oC. Liquid can be stored for ~3-6 months when kept at -20oC.

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: up to 6months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

General References:

H.R. Morris et al., Nature, 308, 746 (1984)

Citations of ADI's antibodies for CRLR and RAMP
(see updated list at :
www.4adi.com/flr/rampflr.html)

*This product is for In vitro research use only.

Related material available from ADI

Antibodies RAMP1-3, Amylin, calcitonin, CGRP, Adrenomedullin, CRLR