

Product Specification Sheet

**Human Calcitonin**

Cat. # CT15-P-1000 Human Calcitonin (CT 1-32 aa amide) full length pure **SIZE:** 1 mg

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.

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:** Calcitonin causes a rapid but short-lived drop in the level of calcium and phosphate in blood by promoting the incorporation of those ions in the bones. Katalcalcin is a potent plasma calcium-lowering peptide.

**SUBCELLULAR LOCATION:** Secreted.

**ALTERNATIVE PRODUCTS:** 3 named isoforms produced by alternative splicing. isoforms 1 (P01258-1, 141-aa precursor); isoform 2 (141 aa; 134-141 changed); isoforms 3 (128 aa)

**Protein name** Calcitonin [Precursor]

**Synonyms** None ; Contains Calcitonin Katalcalcin (Calcitonin carboxyl-terminal peptide) (CCP) PDN-21)

**Gene name** Name: CALCA

**Synonyms:** CALC1

**Source of Antigen**

Human Calcitonin (1-32-aa) was synthesized and purified by hplc (>97%),

<b>Sequence</b>	Cys-Gly-Asn-Leu-Ser-Thr-Cys-Met-Leu-Gly-Thr-Tyr-Thr-Gln-Asp-Phe-Asn-Lys-Phe-His-Thr-Phe-Pro-Gln-Thr-Ala-Ile-Gly-Val-Gly-Ala-Pro-NH <sub>2</sub>
<b>Purity</b>	>97%
<b>Mol Wt</b>	3417.9
<b>Notes</b>	Disulfide bridge Cys1-Cys7

**Form & Storage**

Human calcitonin is supplied in lyophilized form. Powder can be dissolved in DMSO or in other buffers to prepare stock of 1mg/ml. Working dilutions can be diluted further 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.

**General References:**

(1). Le Moullec JM et al (1984) FEBS lett. 167,93; Nelkin, BD et al (1984) BBRC 1123, 648; Edbrooke MR et al (1985) EMBo J. 4, 715-724; Jonas V et al (1985) PNAS 82, 1994; Riley, JH et al (1986) FEBS lett. 198, 71; Broad PM et al (1989) Nucl. Acid. Res. 17, 6999; Bracq S et al (1993) FEBS Lett. 331, 15; McLatchie LM et al (1998) Nature 393, 333-339.

\*This product is for In vitro research use only.

**Related material available from ADI**

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

CT15-P-1000

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