

Product Specification Sheet

Calcitonin Antibodies

Cat. # CT12-M	Mouse monoclonal Anti-Human Calcitonin IgG #1	SIZE: 100 ug
Cat. # CT13-M	Mouse monoclonal Anti-Human Calcitonin IgG#2	SIZE: 100 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.

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 and Antibodies

Antigen	Human Calcitonin full length Calcitonin/CALC; location ~N-terminus (protein accession #P01258) designated cat #CT15-P
Ab Host/type	Mouse, Monoclonal, IgG2a (CT12-M) & IgG1 (CT13-M) Protein A/G Aff pure IgG
2-ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage

Affinity pure IgG

100 ug/100ul solution lyophilized powder

Supplied in **Buffer:** PBS+0.1% BSA

Reconstitute powder in PBS at 1mg/ml

Supplied in Buffer: PBS pH 7.5,

CT12-13-M

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Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, S an Antonio, T X 7 8 24 4 , U S A ;

Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20°C and powder at 4°C or -20°C..

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

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.1-1 ug/ml for affinity pure). **CT12-M works well for coating** or capture and **CT13-M for detection**.

Histochemistry & Immunofluorescence: Not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml in paraformaldehyde fixed sections of tissues.

Specificity & Cross-reactivity

This antibody reacts with human pro-calcitonin and Calcitonin. Antibody cross-reactivity in various species has not been studied. Full length human (#CT15-P500)

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.

2. Citations for ADI Antibodies (see updates at the web site)

*This product is for In vitro research use only.

Related material available from ADI

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

Western blot Recycling Kit- Reuse blots in Just 5-10 min. (use the same strip for various RAMPS) New formulation will strip antibodies in just a few minutes at room temp. (no boiling or pungent mercaptoethanol).

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