

Product Specification Sheet

Receptor Activity Modifying Proteins 3 (RAMP3) Antibodies

<input type="checkbox"/> Cat. # RAMP31-P	Human RAMP3 Control/blocking Peptides 1	SIZE: 100 ug
<input type="checkbox"/> Cat. # RAMP31-S	Rabbit Anti-Human RAMP3 antiserum	SIZE: 100 ul
<input type="checkbox"/> Cat. # RAMP31-A	Rabbit Anti-Human RAMP3 IgG (aff pure)	SIZE: 100 ug

The calcitonin family peptides probably act through G-protein coupled membrane receptors. The gene for calcitonin receptors has been cloned. It is homologous to GPCRs in family "B" which typically recognizes regulatory peptides (secretin, glucagons, VIP). Recently, a homolog of calcitonin receptor, **CRLR** (calcitonin-receptor-like receptor human 461 aa; rat/mouse 463 aa) was identified. CRLR has 55% homology with calcitonin receptor. 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. RAMPs1-3 contains an N-terminal signal peptide, an extracellular N-terminus, a single transmembrane domain near the C-terminus, and cytoplasmic C-terminus. RAMP1-3 displays 31% identity. RAMPs may be involved in the transport of CRLR to the plasma membrane. **RAMP3** is most abundant in the kidney and lung.

FUNCTION: Transports the calcitonin gene-related peptide type 1 receptor (CALCRL) to the plasma membrane. Acts as a receptor for adrenomedullin (AM) together with CALCRL.

SUBUNIT: Heterodimer of CALCRL and RAMP3 (By similarity).

SUBCELLULAR LOCATION: Membrane; Single-pass type I membrane protein.

TISSUE SPECIFICITY: Strongly expressed in lung, breast, immune system and fetal tissues.

SIMILARITY: Belongs to the RAMP family.

Protein name Receptor activity-modifying protein 3 [Precursor]

Synonyms CRLR activity-modifying protein 3

Calcitonin-receptor-like receptor activity-modifying protein 3

Gene name RAMP3

Source of Antigen and Antibodies

Antigen	A 13-aa peptide ~CT Cytoplasmic domain and 2 nd peptide of 9-aa from the middle region of Human RAMP3 and (protein accession #O60896, refs 1); the mixture Designation (# RAMP31-P, control/blocking peptide) conjugated to KLH
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (# RAMP31-S) and IgG, purified over antigen-agarose (Cat # RAMP31-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder

Supplied in Buffer: 0.05% azide

Reconstitute powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder

Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder

Supplied in Buffer: PBS pH 7.5,

Reconstitute powder in PBS at 1 mg/ml.

Storage

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

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

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 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 (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

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

The RAMP31-P peptides are 84% and 78% conserved in mouse and rat RAMP3, respectively. However, no significant sequence homology is detected with other Ramps. Antibody cross-reactivity in various species has not been studied. The RAMP31-P control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: www.4adi.com\data\abblock.html).

General References:

(1). McLatchie LM (1998) Nature 393, 333; Nagae T (2000) BBRC 270, 89; Chakravarty P (2000) Br J. Pharmacol. 130, 189; Aldecoa A (2000) FEBS Lett. 471, 156; Husmann, K (2000); Mol Cell Endocrinol (2000) 162, 35.

(2) Citations of ADI's Antibodies (see web site for updated list)

*This product is for In vitro research use only.

Related material available from ADI

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

RAMP31-S-A-P 70816A

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