

RAMP3 (C-20): sc-8855

BACKGROUND

Receptor activity-modifying proteins (RAMPs) are transmembrane accessory proteins that influence the pharmacological profiles of the calcitonin receptor-like receptors (CRLR). RAMPs associate with CRLR in the endoplasmic reticulum and facilitate the glycosylation and transport of CRLR to the cell surface, where the mature protein then operates as a receptor for two structurally related vasodilatory peptides, calcitonin-gene-related peptide (CGRP) or adrenomedullin (ADM). RAMP1 associating with CRLR confers a CGRP receptor, while RAMP2 and RAMP3 preferentially induce a responsiveness to ADM. RAMP proteins, including RAMP1, RAMP2 and RAMP3, are structurally similar as they are type I receptors, which have a single extracellular N-terminus and a cytoplasmic C-terminus, and they share approximately 55% sequence similarity. RAMP-1 expression is highest in the uterus, brain and gastrointestinal tract, whereas RAMP-2 and RAMP-3 are highest in lung, breast and fetal tissues.

REFERENCES

1. McLatchie, L.M., et al. 1998. RAMPs regulate the transport and ligand specificity of the calcitonin-receptor-like receptor. *Nature* 393: 333-339.
2. Sams, A., et al. 1998. Expression of calcitonin receptor-like receptor and receptor-activity-modifying proteins in human cranial arteries. *Neurosci. Lett.* 258: 41-44.
3. Fraser, N.J., et al. 1999. The amino terminus of receptor activity modifying proteins is a critical determinant of glycosylation state and ligand binding of calcitonin receptor-like receptor. *Mol. Pharmacol.* 55: 1054-1059.
4. Foord, S.M., et al. 1999. RAMPs: accessory proteins for seven transmembrane domain receptors. *Trends Pharmacol. Sci.* 20: 184-187.
5. Kamitani, S., et al. 1999. The RAMP2/CRLR complex is a functional adrenomedullin receptor in human endothelial and vascular smooth muscle cells. *FEBS Lett.* 448: 111-114.
6. Drake, W.M., et al. 1999. Desensitization of CGRP and adrenomedullin receptors in SK-N-MC cells: implications for the RAMP hypothesis. *Endocrinology* 140: 533-537.
7. Buhlmann, N., et al. 1999. A receptor activity modifying protein (RAMP)2-dependent adrenomedullin receptor is a calcitonin gene-related peptide receptor when coexpressed with human RAMP1. *Endocrinology* 140: 2883-2890.

CHROMOSOMAL LOCATION

Genetic locus: RAMP3 (human) mapping to 7p13; Ramp3 (mouse) mapping to 11 A1.

SOURCE

RAMP3 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RAMP3 of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8855 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RAMP3 (C-20) is recommended for detection of RAMP3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RAMP3 (C-20) is also recommended for detection of RAMP3 in additional species, including canine.

Suitable for use as control antibody for RAMP3 siRNA (h): sc-40896, RAMP3 siRNA (m): sc-40897, RAMP3 shRNA Plasmid (h): sc-40896-SH, RAMP3 shRNA Plasmid (m): sc-40897-SH, RAMP3 shRNA (h) Lentiviral Particles: sc-40896-V and RAMP3 shRNA (m) Lentiviral Particles: sc-40897-V.

Molecular Weight of RAMP3 monomer: 28 kDa.

Molecular Weight of RAMP3 homodimer: 50 kDa.

Molecular Weight of RAMP3 heterodimer: 73-75 kDa

Positive Controls: P 23 whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Lin, W.S., et al. 2010. The subcellular localization and protein stability of mouse α -actinin 2 is controlled by its nuclear receptor binding motif in C2C12 cells. *Int. J. Biochem. Cell Biol.* 42: 2082-2091.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **RAMP3 (G-1): sc-365313**, our highly recommended monoclonal alternative to RAMP3 (C-20).