

RAMP2 (B-5): sc-365240

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). RAMP-1 associating with CRLR confers a CGRP receptor, while RAMP-2 and RAMP-3 preferentially induce a responsiveness to ADM. RAMP proteins, including RAMP-1, RAMP-2 and RAMP-3, 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.

CHROMOSOMAL LOCATION

Genetic locus: RAMP2 (human) mapping to 17q21.31; Ramp2 (mouse) mapping to 11 D.

SOURCE

RAMP2 (B-5) is a mouse monoclonal antibody raised against amino acids 28-166 of RAMP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RAMP2 (B-5) is available conjugated to agarose (sc-365240 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365240 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365240 PE), fluorescein (sc-365240 FITC), Alexa Fluor® 488 (sc-365240 AF488), Alexa Fluor® 546 (sc-365240 AF546), Alexa Fluor® 594 (sc-365240 AF594) or Alexa Fluor® 647 (sc-365240 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365240 AF680) or Alexa Fluor® 790 (sc-365240 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, RAMP2 (B-5) is available conjugated to Alexa Fluor® 405 (sc-365240 AF405), 100 µg/2 ml, for IF, IHC(P) and FCM.

RESEARCH USE

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

APPLICATIONS

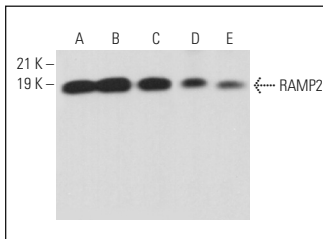
RAMP2 (B-5) is recommended for detection of RAMP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RAMP2 siRNA (h): sc-36378, RAMP2 siRNA (m): sc-36379, RAMP2 shRNA Plasmid (h): sc-36378-SH, RAMP2 shRNA Plasmid (m): sc-36379-SH, RAMP2 shRNA (h) Lentiviral Particles: sc-36378-V and RAMP2 shRNA (m) Lentiviral Particles: sc-36379-V.

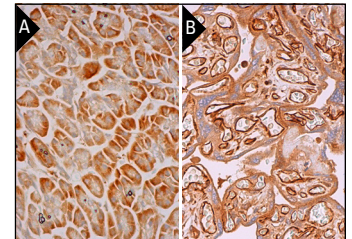
Molecular Weight of RAMP2: 20 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, F9 cell lysate: sc-2245 or A-10 cell lysate: sc-3806.

DATA



RAMP2 (B-5): sc-365240. Western blot analysis of RAMP2 expression in Neuro-2A (A), F9 (B) and A-10 (C) whole cell lysates and mouse lung (D) and rat lung (E) tissue extracts.



RAMP2 (B-5): sc-365240. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells and membrane and cytoplasmic staining of endothelial cells (B).

SELECT PRODUCT CITATIONS

1. Chen, Y., et al. 2020. Intermedin1-53 attenuates aging-associated vascular calcification in rats by upregulating sirtuin 1. *Aging* 12: 5651-5674.
2. Velard, F., et al. 2020. Adrenomedullin and truncated peptide adrenomedullin(22-52) affect chondrocyte response to apoptosis *in vitro*: downregulation of FAS protects chondrocyte from cell death. *Sci. Rep.* 10: 16740.
3. Larrue, C., et al. 2021. Adrenomedullin-CALCRL axis controls relapse-initiating drug tolerant acute myeloid leukemia cells. *Nat. Commun.* 12: 422.
4. Lai, C.H., et al. 2021. RAMP2-AS1 regulates endothelial homeostasis and aging. *Front. Cell Dev. Biol.* 9: 635307.

STORAGE

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

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