SANTA CRUZ BIOTECHNOLOGY, INC.

# RAMP3 (G-1): sc-365313

## 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.
4. Foord, S.M. and Marshall, F.H. 1999. RAMPs: accessory proteins for seven transmembrane domain receptors. Trends Pharmacol. Sci. 20: 184-187.


## CHROMOSOMAL LOCATION

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

## SOURCE

RAMP3 (G-1) is a mouse monoclonal antibody raised against amino acids 15-139 of RAMP3 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RAMP3 (G-1) is available conjugated to agarose (sc-365313 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365313 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365313 PE), fluorescein (sc-365313 FITC), Alexa Fluor® 488 (sc-365313 AF488), Alexa Fluor® 546 (sc-365313 AF546), Alexa Fluor® 594 (sc-365313 AF594) or Alexa Fluor® 647 (sc-365313 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365313 AF680) or Alexa Fluor® 790 (sc-365313 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

RAMP3 (G-1) is recommended for detection of RAMP3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

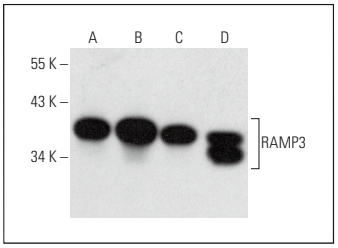
Molecular Weight of RAMP3 monomer: 28 kDa.

Molecular Weight of RAMP3 homodimer: 50 kDa.

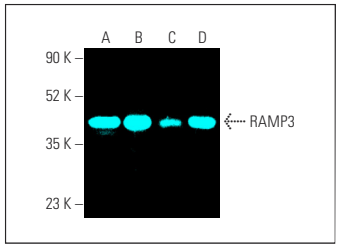
Molecular Weight of RAMP3 heterodimer: 73-75 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, RPE-J cell lysate: sc-24771 or NRK whole cell lysate: sc-364197.

## DATA




RAMP3 (G-1): sc-365313. Western blot analysis of RAMP3 expression in Neuro-2A (**A**), AMJ2-C8 (**B**), NRK (**C**) and RPE-J (**D**) whole cell lysates.




RAMP3 (G-1): sc-365313. Fluorescent western blot analysis of RAMP3 expression in Neuro-2A (**A**), AMJ2-C8 (**B**), NRK (**C**) and P 23 (**D**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-$IgG_1$ BP-CFL 647: sc-533664.

## 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. Edvinsson, L., et al. 2020. Expression of the CGRP family of neuropeptides and their receptors in the trigeminal ganglion. J. Mol. Neurosci. 70: 930-944.
3. Larrue, C., et al. 2021. Adrenomedullin-CALCRL axis controls relapse-initiating drug tolerant acute myeloid leukemia cells. Nat. Commun. 12: 422.
4. Maddahi, A., et al. 2024. Sex differences in expression of CGRP family of receptors and ligands in the rat trigeminal system. J. Headache Pain 25: 193.


## STORAGE

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