SANTA CRUZ BIOTECHNOLOGY, INC.

RAMP1 (FL-148): sc-11379

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. RAMP1 expression is highest in the uterus, brain and gastrointestinal tract, whereas RAMP2 and RAMP3 are highest in lung, breast and fetal tissues.

CHROMOSOMAL LOCATION

Genetic locus: RAMP1 (human) mapping to 2q37.3; Ramp1 (mouse) mapping to 1 D.

SOURCE

RAMP1 (FL-148) is a rabbit polyclonal antibody raised against amino acids 1-148 representing full length RAMP1 of human origin.

PRODUCT

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

APPLICATIONS

RAMP1 (FL-148) is recommended for detection of RAMP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 RAMP1 siRNA (h): sc-40894, RAMP1 siRNA (m): sc-40895, RAMP1 shRNA Plasmid (h): sc-40894-SH, RAMP1 shRNA Plasmid (m): sc-40895-SH, RAMP1 shRNA (h) Lentiviral Particles: sc-40894-V and RAMP1 shRNA (m) Lentiviral Particles: sc-40895-V.

Positive Controls: ES-2 cell lysate: sc-24674, MCF7 whole cell lysate: sc-2206 or PC-3 cell lysate: sc-2220.

STORAGE

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

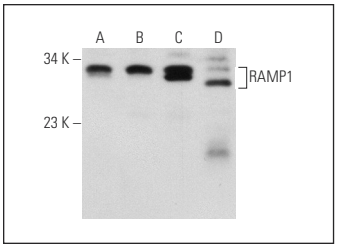
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

RESEARCH USE

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

DATA



RAMP1 (FL-148): sc-11379. Western blot analysis of RAMP1 expression in PC-3 (**A**), ES-2 (**B**) and MCF7 (**C**) whole cell lysates and mouse heart tissue extract (**D**).

SELECT PRODUCT CITATIONS

1. Cueille, C., et al. 2002. Increased myocardial expression of RAMP1 and RAMP3 in rats with chronic heart failure. Biochem. Biophys. Res. Commun. 294: 340-346.
2. Zeng, Q., et al. 2009. Upregulated expression of intermedin and its receptor in the myocardium and aorta in spontaneously hypertensive rats. Peptides 30: 391-399.
3. Pan, C.S., et al. 2010. Adrenomedullin ameliorates the development of atherosclerosis in apoE$^{-/-}$ mice. Peptides 31: 1150-1158.
4. Cai, Y., et al. 2010. Intermedin inhibits vascular calcification by increasing the level of matrix γ-carboxyglutamic acid protein. Cardiovasc. Res. 85: 864-873.
5. Bonner, K., et al. 2010. Expression of functional receptor activity modifying protein 1 by airway epithelial cells with dysregulation in asthma. J. Allergy Clin. Immunol. 126: 1277-1283.e3.
6. Harigai, Y., et al. 2011. Differential roles of calcitonin family peptides in the dendrite formation and spinogenesis of the cerebral cortex *in vitro.* Neuropeptides 45: 263-272.
7. Rychter, J.W., et al. 2011. CGRP1 receptor activation induces piecemeal release of protease-1 from mouse bone marrow-derived mucosal mast cells. Neurogastroenterol. Motil. 23: e57-e68.
8. Hipólito, U.V., et al. 2011. Chronic ethanol consumption reduces adrenomedullin-induced relaxation in the isolated rat aorta. Alcohol 45: 805-814.