SANTA CRUZ BIOTECHNOLOGY, INC.

RAMP3 (H-125): sc-11381

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

SOURCE

RAMP3 (H-125) is a rabbit polyclonal antibody raised against amino acids 15-139 of RAMP3 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

RAMP3 (H-125) 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), 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: P 23 whole cell lysate.

STORAGE

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

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. Zhao, Y., et al. 2006. Differential expression of components of the cardiomyocyte adrenomedullin/intermedin receptor system following blood pressure reduction in nitric oxide-deficient hypertension. J. Pharmacol. Exp. Ther. 316: 1269-1281.
3. Xu, Y., et al. 2007. Adrenomedullin stimulates nitric oxide production from primary rat hypothalamic neurons: roles of calcium and phosphatases. Mol. Pharmacol. 72: 112-120.
4. Pan, C.S., et al. 2007. The myocardial response to adrenomedullin involves increased cAMP generation as well as augmented Akt phosphorylation. Peptides 28: 900-909.
5. Granholm, S., et al. 2008. Expression of the calcitonin receptor, calcitonin receptor-like receptor, and receptor activity modifying proteins during osteoclast differentiation. J. Cell. Biochem. 104: 920-933.
6. Bell, D., et al. 2008. Influence of atenolol and nifedipine on nitric-oxide deficient cardiomyocyte hypertrophy and expression of the cardio-endocrine peptide intermedin and its receptor components. Cell. Physiol. Biochem. 21: 203-214.
7. Bell, D., et al. 2008. Expression of the counter-regulatory peptide intermedin is augmented in the presence of oxidative stress in hypertrophied cardiomyocytes. Cell. Physiol. Biochem. 21: 409-420.
8. 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.
9. Pan, C.S., et al. 2010. Adrenomedullin ameliorates the development of atherosclerosis in apoE$^{-/-}$ mice. Peptides 31: 1150-1158.
10. Hipolito, U.V., et al. 2011. Chronic ethanol consumption reduces adrenomedullin-induced relaxation in the isolated rat aorta. Alcohol 45: 805-814.
11. Rocha, J.T., et al. 2012. Ethanol consumption alters the expression and reactivity of adrenomedullin in the rat mesenteric arterial bed. Alcohol Alcohol. 47: 9-17.
12. Guo, X., et al. 2012. Intermedin is overexpressed in hepatocellular carcinoma and regulates cell proliferation and survival. Cancer Sci. 103: 1474-1480.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **RAMP3 (G-1): sc-365313**, our highly recommended monoclonal alternative to RAMP3 (H-125).