SANTA CRUZ BIOTECHNOLOGY, INC.

p38β (N-14): sc-15918

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MAP (mitogen-activated protein) kinases play a significant role in many biological processes, including cell adhesion and spreading, cell differentiation and apoptosis. p38α, p38β and p38γ, also known as MAPK14, MAPK11 and MAPK12, respectively, each contain one protein kinase domain and belong to the MAP kinase family. Expressed in different areas throughout the body with common expression patterns in heart, p38 proteins use magnesium as a cofactor to catalyze the ATP-dependent phosphorylation of target proteins. Via their catalytic activity, p38α, p38β and p38γ are involved in a variety of events throughout the cell, including signal transduction pathways, cytokine production and cell proliferation and differentiation. The p38 proteins are subject to phosphoryation on Thr and Tyr residues, an event which is thought to activate the phosphorylated protein.

CHROMOSOMAL LOCATION

Genetic locus: MAPK11 (human) mapping to 22q13.33; Mapk11 (mouse) mapping to 15 E3.

SOURCE

p38β (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of p38β 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.

Blocking peptide available for competition studies, sc-15918 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

p38β (N-14) is recommended for detection of p38β 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), 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).

p38β (N-14) is also recommended for detection of p38β in additional species, including equine and canine.

Suitable for use as control antibody for p38β siRNA (h): sc-39116, p38β siRNA (m): sc-39117, p38β shRNA Plasmid (h): sc-39116-SH, p38β shRNA Plasmid (m): sc-39117-SH, p38β shRNA (h) Lentiviral Particles: sc-39116-V and p38β shRNA (m) Lentiviral Particles: sc-39117-V.

Molecular Weight of p38β: 41 kDa.

Positive Controls: p38β (h4): 293T Lysate: sc-174918.

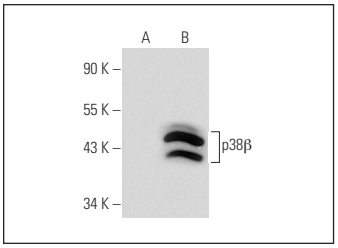
STORAGE

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

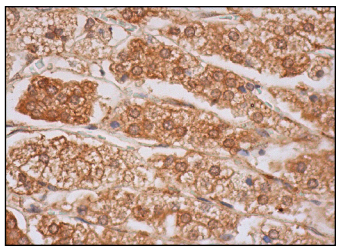
RESEARCH USE

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

DATA



p38β (N-14): sc-15918. Western blot analysis of p38β expression in non-transfected: sc-117752 (**A**) and human p38β transfected: sc-174918 (**B**) 293T whole cell lysates.



p38β (N-14): sc-15918. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic, membrane and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Mahlknecht, U., et al. 2004. Histone deacetylase 3, a class I histone deacetylase, suppresses MAPK11-mediated activating transcription factor-2 activation and represses TNF gene expression. J. Immunol. 173: 3979-3990.
2. Lahti, A., et al. 2006. Inhibition of p38 mitogen-activated protein kinase enhances c-Jun N-terminal kinase activity: implication in inducible nitric oxide synthase expression. BMC Pharmacol. 6: 5.
3. Rice, K.M., et al. 2006. Diabetes alters vascular mechanotransduction: pressure-induced regulation of mitogen activated protein kinases in the rat inferior vena cava. Cardiovasc. Diabetol. 5: 18.
4. Wieteska-Skrzeczynska, W., et al. 2011. Growth factor and cytokine interactions in myogenesis. Part II. Expression of IGF binding proteins and protein kinases essential for myogenesis in mouse C2C12 myogenic cells exposed to TNF-α and IFN-γ. Pol. J. Vet. Sci. 14: 425-431.
5. Hsieh, Y.L., et al. 2014. Effects of garlic oil on interleukin-6 mediated cardiac hypertrophy in hypercholesterol-fed hamsters. Chin. J. Physiol. 57: 320-328.
6. Hu, W.S., et al. 2014. Gelsolin (GSN) induces cardiomyocyte hypertrophy and BNP expression via p38 signaling and GATA-4 transcriptional factor activation. Mol. Cell. Biochem. 390: 263-270.

PROTOCOLS

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

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Try **p38α/β (A-12): sc-7972** or **p38α (F-9): sc-271120**, our highly recommended monoclonal alternatives to p38β (N-14). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **p38α/β (A-12): sc-7972**.