SANTA CRUZ BIOTECHNOLOGY, INC.

p38β (C-16): sc-6176

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.

SOURCE

p38β (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-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-6176 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

p38β (C-16) is recommended for detection of p38β of 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 p38β siRNA (h): sc-39116, p38β shRNA Plasmid (h): sc-39116-SH and p38β shRNA (h) Lentiviral Particles: sc-39116-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.

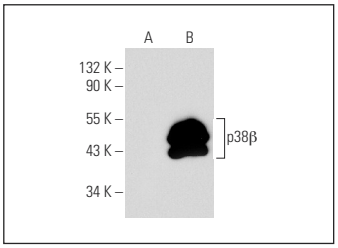
PROTOCOLS

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

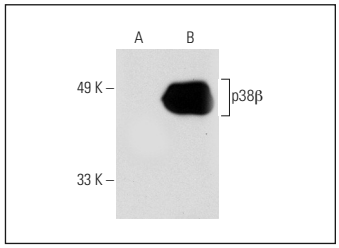
RESEARCH USE

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

DATA



p38β (C-16): sc-6176. Western blot analysis of p38β expression in non-transfected: sc-117752 (**A**) and human p38β transfected: sc-174918 (**B**) 293T whole cell lysates.



p38β (C-16): sc-6176. Western blot analysis of p38β expression in non-transfected: sc-117752 (**A**) and human p38β transfected: sc-114080 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Börsch-Haubold, A.G., et al. 1999. Phosphorylation of cytosolic phospholipase A_2 in platelets is mediated by multiple stress-activated protein kinase pathways. Eur. J. Biochem. 265: 195-203.
2. Li, W., et al. 2004. Mechanism of human dermal fibroblast migration driven by type I collagen and platelet-derived growth factor-BB. Mol. Biol. Cell 15: 294-309.
3. Behren, A., et al. 2005. The p38 SAPK pathway is required for Ha-Ras induced *in vitro* invasion of NIH/3T3 cells. Exp. Cell Res. 303: 321-330.
4. Sharma, A., et al. 2009. The p38 MAPK regulates 11β-hydroxysteroid dehydrogenase type 2 (11β-HSD2) expression in human trophoblast cells through modulation of 11β-HSD2 mRNA stability. Endocrinology 150: 4278-4286.
5. Adhikary, G., et al. 2010. PKC-δ and -η, MEKK-1, MEK-6, MEK-3, and p38-δ are essential mediators of the response of normal human epidermal keratinocytes to differentiating agents. J. Invest. Dermatol. 130: 2017-2030.
6. Diring, J., et al. 2011. A cytoplasmic negative regulator isoform of ATF7 impairs ATF7 and ATF2 phosphorylation and transcriptional activity. PLoS ONE 6: e23351.
7. Kanade, S.R. and Eckert, R.L. 2012. Protein arginine methyltransferase 5 (PRMT5) signaling suppresses protein kinase Cδ- and p38δ-dependent signaling and keratinocyte differentiation. J. Biol. Chem. 287: 7313-7323.
8. Scharf, M., et al. 2013. Mitogen-activated protein kinase-activated protein kinases 2 and 3 regulate SERCA2a expression and fiber type composition to modulate skeletal muscle and cardiomyocyte function. Mol. Cell. Biol. 33: 2586-2602.