SANTA CRUZ BIOTECHNOLOGY, INC.

# p38 beta MAPK11 (BB10): sc-33689

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. p38 alpha MAPK14, p38 beta MAPK11 and p38 gamma MAPK12 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, p38 alpha MAPK14, p38 beta MAPK11 and p38 gamma MAPK12 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.

## REFERENCES


1. Lee, J.C., et al. 1994. A protein kinase involved in the regulation of inflammatory cytokine biosynthesis. Nature 372: 739-746.
2. Han, J., et al. 1995. Molecular cloning of human p38 MAP kinase. Biochim. Biophys. Acta 1265: 224-227.
3. Li, Z., et al. 1996. The primary structure of p38γ: a new member of p38 group of MAP kinases. Biochem. Biophys. Res. Commun. 228: 334-340.
4. Jiang, Y., et al. 1996. Characterization of the structure and function of a new mitogen-activated protein kinase (p38β). J. Biol. Chem. 271: 17920-17926.
5. Tamura, K., et al. 2000. Requirement for p38α in erythropoietin expression: a role for stress kinases in erythropoiesis. Cell 102: 221-231.
6. Sudo, T., et al. 2002. Exip, a new alternative splicing variant of p38α, can induce an earlier onset of apoptosis in HeLa cells. Biochem. Biophys. Res. Commun. 291: 838-843.
7. Court, N.W., et al. 2002. Cardiac expression and subcellular localization of the p38 mitogen-activated protein kinase member, stress-activated protein kinase-3 (SAPK3). J. Mol. Cell. Cardiol. 34: 413-426.


## CHROMOSOMAL LOCATION

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

## SOURCE

p38 beta MAPK11 (BB10) is a mouse monoclonal antibody raised against recombinant p38 beta MAPK11 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.

## STORAGE

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

## APPLICATIONS

p38 beta MAPK11 (BB10) is recommended for detection of p38 beta MAPK11 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]; may cross-react with p38α, p38γ and p38δ.

Suitable for use as control antibody for p38 beta MAPK11 siRNA (h): sc-39116, p38 beta MAPK11 siRNA (m): sc-39117, p38 beta MAPK11 shRNA Plasmid (h): sc-39116-SH, p38 beta MAPK11 shRNA Plasmid (m): sc-39117-SH, p38 beta MAPK11 shRNA (h) Lentiviral Particles: sc-39116-V and p38 beta MAPK11 shRNA (m) Lentiviral Particles: sc-39117-V.

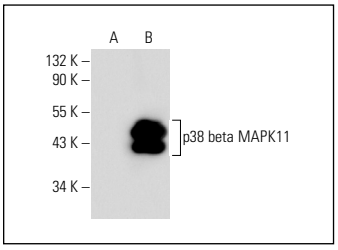
Molecular Weight of p38 beta MAPK11: 38 kDa.

Positive Controls: p38 beta MAPK11 (h): 293T Lysate: sc-114080.

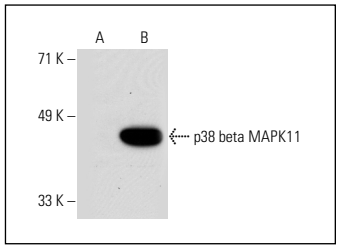
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA




p38 beta MAPK11 (BB10): sc-33689. Western blot analysis of p38 beta MAPK11 expression in non-transfected: sc-117752 (**A**) and human p38 beta MAPK11 transfected: sc-174918 (**B**) 293T whole cell lysates.




p38 beta MAPK11 (BB10): sc-33689. Western blot analysis of p38 beta MAPK11 expression in non-transfected: sc-117752 (**A**) and human p38 beta MAPK11 transfected: sc-114080 (**B**) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Wang, X., et al. 2010. Changes in the level of apoptosis-related proteins in Jurkat cells infected with HIV-1 versus HIV-2. Mol. Cell. Biochem. 337: 175-183.


## RESEARCH USE

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

CONJUGATES

See **p38α/β MAPK (A-12): sc-7972** for p38α/β MAPK antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.