

p38 beta MAPK11 (F-3): sc-390984

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 phosphorylation on Thr and Tyr residues, an event which is thought to activate the phosphorylated protein.

REFERENCES

- Lee, J.C., et al. 1994. A protein kinase involved in the regulation of inflammatory cytokine biosynthesis. *Nature* 372: 739-746.
- Han, J., et al. 1995. Molecular cloning of human p38 MAP kinase. *Biochim. Biophys. Acta* 1265: 224-227.
- Li, Z., et al. 1996. The primary structure of p38 γ : a new member of p38 group of MAP kinases. *Biochem. Biophys. Res. Commun.* 228: 334-340.

CHROMOSOMAL LOCATION

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

SOURCE

p38 beta MAPK11 (F-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 38-57 near the N-terminus of p38 beta MAPK11 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p38 beta MAPK11 (F-3) is available conjugated to agarose (sc-390984 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390984 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390984 PE), fluorescein (sc-390984 FITC), Alexa Fluor[®] 488 (sc-390984 AF488), Alexa Fluor[®] 546 (sc-390984 AF546), Alexa Fluor[®] 594 (sc-390984 AF594) or Alexa Fluor[®] 647 (sc-390984 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390984 AF680) or Alexa Fluor[®] 790 (sc-390984 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390984 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

p38 beta MAPK11 (F-3) is recommended for detection of p38 beta MAPK11 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

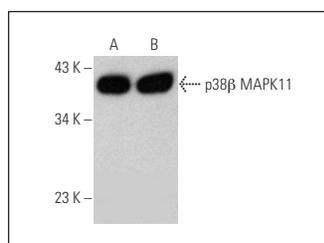
p38 beta MAPK11 (F-3) is also recommended for detection of p38 beta MAPK11 in additional species, including equine.

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.

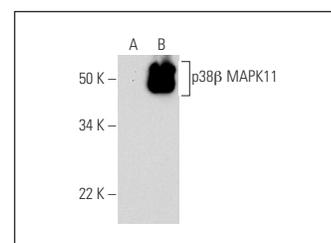
Molecular Weight of p38 beta MAPK11: 41 kDa.

Positive Controls: p38 beta MAPK11 (h4): 293T Lysate: sc-174918, K-562 whole cell lysate: sc-2203 or NCI-H460 whole cell lysate: sc-364235.

DATA



p38 β MAPK11 (F-3): sc-390984. Western blot analysis of p38 β MAPK11 expression in K-562 (A) and NCI-H460 (B) whole cell lysates.



p38 β MAPK11 (F-3): sc-390984. Western blot analysis of p38 β MAPK11 expression in non-transfected: sc-117752 (A) and human p38 β MAPK11 transfected: sc-174918 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Wang, Y., et al. 2022. Interleukin 33-mediated inhibition of A-type K⁺ channels induces sensory neuronal hyperexcitability and nociceptive behaviors in mice. *Theranostics* 12: 2232-2247.
- Iori, S., et al. 2022. Deepening the whole transcriptomics of bovine liver cells exposed to AFB1: a spotlight on Toll-like receptor 2. *Toxins* 14: 504.
- Pranteda, A., et al. 2023. Activated MKK3/MYC crosstalk impairs dabrafenib response in BRAFV600E colorectal cancer leading to resistance. *Biomed. Pharmacother.* 167: 115480.
- Iori, S., et al. 2024. New insights into aflatoxin B1 mechanistic toxicology in cattle liver: an integrated approach using molecular docking and biological evaluation in CYP1A1 and CYP3A74 knockout BFH12 cell lines. *Arch. Toxicol.* 98: 3097-3108.

STORAGE

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