

p-p38 (E-1): sc-166182



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 α , p38 β and p38 γ , 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, p38 α , p38 β and p38 γ 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.

CHROMOSOMAL LOCATION

Genetic locus: MAPK14 (human) mapping to 6p21.31, MAPK11/MAPK12 (human) mapping to 22q13.33; Mapk14 (mouse) mapping to 17 A3.3, Mapk11/Mapk12 (mouse) mapping to 15 E3.

SOURCE

p-p38 (E-1) is a mouse monoclonal antibody raised against Tyr 182 phosphorylated p38 α of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p-p38 (E-1) is available conjugated to agarose (sc-166182 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166182 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166182 PE), fluorescein (sc-166182 FITC), Alexa Fluor[®] 488 (sc-166182 AF488), Alexa Fluor[®] 546 (sc-166182 AF546), Alexa Fluor[®] 594 (sc-166182 AF594) or Alexa Fluor[®] 647 (sc-166182 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166182 AF680) or Alexa Fluor[®] 790 (sc-166182 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166182 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

p-p38 (E-1) is recommended for detection of Tyr 182 phosphorylated p38 α , p38 β and p38 γ 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), 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).

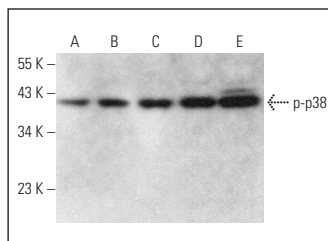
p-p38 (E-1) is also recommended for detection of correspondingly phosphorylated p38 α , p38 β and p38 γ in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of p-p38: 38 kDa.

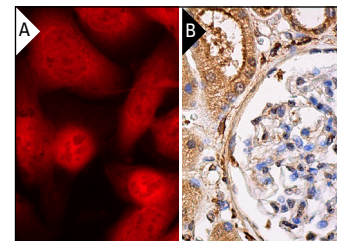
STORAGE

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

DATA



p-p38 (E-1): sc-166182. Western blot analysis of p38 phosphorylation in T98G (A), JAR (B), Sol8 (C), Neuro-2A (D) and C6 (E) whole cell lysates.



p-p38 (E-1) PE: sc-166182 PE. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic and nuclear localization. Blocked with UltraCruz[®] Blocking Reagent: sc-516214 (A). p-p38 (E-1) HRP: sc-166182 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (B).

SELECT PRODUCT CITATIONS

- Robinson, G.A. 1994. Role of fibulin-3 in lung cancer: *in vivo* and *in vitro* analyses. *Mol. Brain Res.* 24: 43-54.
- Lei, F.X., et al. 2018. RIP1 protects melanoma cells from apoptosis induced by BRAF/MEK inhibitors. *Cell Death Dis.* 9: 679.
- Chen, J., et al. 2018. Phosphorylation of Parkin at serine 131 by p38 MAPK promotes mitochondrial dysfunction and neuronal death in mutant A53T α -synuclein model of Parkinson's disease. *Cell Death Dis.* 9: 700.
- Yu, C.D., et al. 2018. Inhibition of miR-126 protects chondrocytes from IL-1 β induced inflammation via upregulation of Bcl-2. *Bone Joint Res.* 7: 414-421.
- Wang, T., et al. 2018. Pro-atherogenic activation of A7r5 cells induced by the oxLDL/ β 2GPI/anti- β 2GPI complex. *Int. J. Mol. Med.* 42: 1955-1966.
- Xu, J., et al. 2018. Co-enzyme Q10 upregulates Hsp70 and protects chicken primary myocardial cells under *in vitro* heat stress via PKC/MAPK. *Mol. Cell. Biochem.* E-published.
- Luo, W., et al. 2018. c-Myc inhibits myoblast differentiation and promotes myoblast proliferation and muscle fibre hypertrophy by regulating the expression of its target genes, miRNAs and lincRNAs. *Cell Death Differ.* E-published.
- Peng, C., et al. 2018. Soybean glycinin- and β -conglycinin-induced intestinal damage in piglets via p38/JNK/NF κ B signaling pathway. *J. Agric. Food Chem.* E-published.

RESEARCH USE

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

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