

p38 α MAPK14 (27): sc-136210

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 MAPK14, p38 β MAPK11 and p38 γ 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 α MAPK14, p38 β MAPK11 and p38 γ 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.

CHROMOSOMAL LOCATION

Genetic locus: MAPK14 (human) mapping to 6p21.31; Mapk14 (mouse) mapping to 17 A3.3.

SOURCE

p38 α MAPK14 (27) is a mouse monoclonal antibody raised against amino acids 243-355 of p38 α MAPK14 of human origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p38 α MAPK14 (27) is recommended for detection of p38 α MAPK14 of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for p38 α MAPK14 siRNA (h): sc-29433, p38 α MAPK14 siRNA (m): sc-29434, p38 α MAPK14 siRNA (r): sc-156091, p38 α MAPK14 shRNA Plasmid (h): sc-29433-SH, p38 α MAPK14 shRNA Plasmid (m): sc-29434-SH, p38 α MAPK14 shRNA Plasmid (r): sc-156091-SH, p38 α MAPK14 shRNA (h) Lentiviral Particles: sc-29433-V, p38 α MAPK14 shRNA (m) Lentiviral Particles: sc-29434-V and p38 α MAPK14 shRNA (r) Lentiviral Particles: sc-156091-V.

Molecular Weight of p38 α MAPK14: 38 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-431 whole cell lysate: sc-2201 or MCF7 whole cell lysate: sc-2206.

STORAGE

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

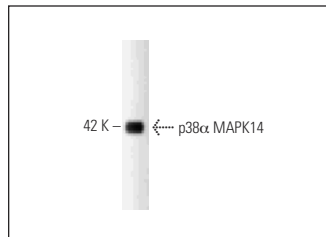
PROTOCOLS

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. Not for resale.

DATA



p38 α MAPK14 (27): sc-136210. Western blot analysis of p38 α MAPK14 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

- Cheng, T., et al. 2013. The potential protective effects of calcitonin involved in coordinating chondrocyte response, extracellular matrix, and subchondral trabecular bone in experimental osteoarthritis. *Connect. Tissue Res.* 54: 139-146.
- Chen, H., et al. 2014. Anti-inflammatory effects of chicanine on murine macrophage by down-regulating LPS-induced inflammatory cytokines in I κ B α /MAPK/ERK signaling pathways. *Eur. J. Pharmacol.* 724: 168-174.
- Liu, W., et al. 2015. The relationship between colonic macrophages and microRNA-128 in the pathogenesis of slow transit constipation. *Dig. Dis. Sci.* 60: 2304-2315.
- Juan, T.K., et al. 2018. Tetrandrine suppresses adhesion, migration and invasion of human colon cancer SW620 cells via inhibition of nuclear factor- κ B, matrix metalloproteinase-2 and matrix metalloproteinase-9 signaling pathways. *Oncol. Lett.* 15: 7716-7724.
- Hao, J., et al. 2019. Surfactant protein A induces the pathogenesis of renal fibrosis through binding to calreticulin. *Exp. Ther. Med.* 17: 459-464.
- Wahedi, H.M., et al. 2020. NED416, a novel synthetic SIRT1 activator, promotes cutaneous wound healing via the MAPK/Rho pathway. *Int. J. Mol. Med.* 46: 149-158.
- Chen, C.C., et al. 2020. Cannabinoid receptor type 1 antagonist inhibits progression of obesity-associated nonalcoholic steatohepatitis in a mouse model by remodeling immune system disturbances. *Immun. Inflamm. Dis.* 8: 544-558.
- Bal, N.B., et al. 2022. Resveratrol and regular exercise may attenuate hypertension-induced cardiac dysfunction through modulation of cellular stress responses. *Life Sci.* 296: 120424.

CONJUGATES

See **p38 α / β MAPK (A-12): sc-7972** for p38 α / β MAPK antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.