**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 MAPK14, 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 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 (human) mapping to 22q13.33; Mapk14 (mouse) mapping to 17 A3.3, Mapk11 (mouse) mapping to 15 E3.

**SOURCE**

p38α/β (A-12) is a mouse monoclonal antibody raised against amino acids 213-360 of p38α of human origin.

**PRODUCT**

Each vial contains 200 μg IgG1 kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin. p38α/β (A-12) is available conjugated to agarose (sc-7972 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7972 HRP), 200 μg/ml, for WB, (HRP) and ELISA; to either phycoerythrin (sc-7972 PE), fluorescein (sc-7972 FITC), Alexa Fluor® 488 (sc-7972 AF488), Alexa Fluor® 546 (sc-7972 AF546), Alexa Fluor® 594 (sc-7972 AF594) or Alexa Fluor® 647 (sc-7972 AF647), 200 μg/ml, for WB (RGB), IF, IHC and FCM; and to either Alexa Fluor® 680 (sc-7972 AF680) or Alexa Fluor® 790 (sc-7972 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM. In addition, p38α/β (A-12) is available conjugated to either TRITC (sc-7972 TRITC, 200 μg/ml) or Alexa Fluor® 405 (sc-7972 AF405), 100 μg/2 ml, for IF, IHC(P) and FCM.

**APPLICATIONS**

p38α/β (A-12) is recommended for detection of p38α and p38β of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). p38α/β (A-12) is also recommended for detection of p38α and p38β in additional species, including equine and porcine.

Molecular Weight of p38α/β: 38 kDa.

Positive Controls: HL-60 whole cell lysate: sc-22094.

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.