

NP60 (C-12): sc-136764

BACKGROUND

MAP (mitogen-activated protein) kinases play a significant role in many biological processes, including cell adhesion and spreading, cell differentiation and apoptosis. Via their catalytic activity, MAP kinases 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. NP60 (nuclear protein of 60 kDa), also known as glyoxylate reductase 1 homolog, 3-hydroxyisobutyrate dehydrogenase-like protein and cytokine-like nuclear factor N-PAC, is a 553 amino acid nuclear protein that regulates the phosphorylation and activation of p38 α in response to stress. There are five isoforms of NP60 that are produced as a result of alternative splicing events.

REFERENCES

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2. Roux, P.P. and Blenis, J. 2004. ERK and p38 MAPK-activated protein kinases: a family of protein kinases with diverse biological functions. *Microbiol. Mol. Biol. Rev.* 68: 320-344.
3. Mittelstadt, P.R., Salvador, J.M., Fornace, A.J. and Ashwell, J.D. 2005. Activating p38 MAPK: new tricks for an old kinase. *Cell Cycle* 4: 1189-1192.
4. Kang, Y.J., Seit-Nebi, A., Davis, R.J. and Han, J. 2006. Multiple activation mechanisms of p38 α mitogen-activated protein kinase. *J. Biol. Chem.* 281: 26225-26234.
5. Fu, J., Yang, Z., Wei, J., Han, J. and Gu, J. 2006. Nuclear protein NP60 regulates p38 MAPK activity. *J. Cell Sci.* 119: 115-123.
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CHROMOSOMAL LOCATION

Genetic locus: GLYR1 (human) mapping to 16p13.3; Glycer1 (mouse) mapping to 16 A1.

SOURCE

NP60 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NP60 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-136764 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

NP60 (C-12) is recommended for detection of NP60 isoforms 1-4 of mouse, rat and human 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)], 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).

NP60 (C-12) is also recommended for detection of NP60 isoforms 1-4 in additional species, including canine and porcine.

Suitable for use as control antibody for NP60 siRNA (h): sc-93243, NP60 siRNA (m): sc-150041, NP60 shRNA Plasmid (h): sc-93243-SH, NP60 shRNA Plasmid (m): sc-150041-SH, NP60 shRNA (h) Lentiviral Particles: sc-93243-V and NP60 shRNA (m) Lentiviral Particles: sc-150041-V.

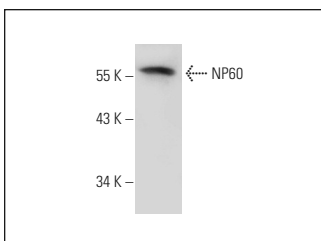
Molecular Weight of NP60: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



NP60 (C-12): sc-136764. Western blot analysis of NP60 expression in HeLa whole cell lysate.

STORAGE

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



Try **NP60 (D-10): sc-390601**, our highly recommended monoclonal alternative to NP60 (C-12).