SANTA CRUZ BIOTECHNOLOGY, INC.

MAPKAPK-2 (C-18): sc-6221

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

The MAPKAP kinases (for MAP kinase activated protein kinases) are a group of MAP kinase substrates which are themselves kinases. In response to activation, the MAP kinases phosphorylate downstream components on a consensus Pro-X-Ser/Thr-Pro motif. Several kinases that contain this motif have been identifed and serve as substrates for the ERK and p38 MAP kinases. These include the serine/threonine kinases Rsk-1 (also designated MAPKAP kinase-1), Rsk-2 and Rsk-3, which are phosphorylated by ERK1 and ERK2. Similarly, p38 phosphorylates and activates the serine/threonine kinases MAPKAP kinase-2 and MAPKAP kinase-3 (also designated 3pK). The serine/threonine kinases Mnk1 and Mnk2 are substrates for both ERK and p38 MAP kinases.

CHROMOSOMAL LOCATION

Genetic locus: MAPKAPK2 (human) mapping to 1q32.1; Mapkapk2 (mouse) mapping to 1 E4.

SOURCE

MAPKAPK-2 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MAPKAPK-2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6221 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MAPKAPK-2 (C-18) is recommended for detection of MAPKAPK-2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MAPKAPK-2 (C-18) is also recommended for detection of MAPKAPK-2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for MAPKAPK-2 siRNA (h): sc-35855, MAPKAPK-2 siRNA (m): sc-35856, MAPKAPK-2 shRNA Plasmid (h): sc-35855-SH, MAPKAPK-2 shRNA Plasmid (m): sc-35856-SH, MAPKAPK-2 shRNA (h) Lentiviral Particles: sc-35855-V and MAPKAPK-2 shRNA (m) Lentiviral Particles: sc-35856-V.

Molecular Weight of MAPKAPK-2: 45 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-431 whole cell lysate: sc-2201 or NIH/3T3 whole cell lysate: sc-2210.

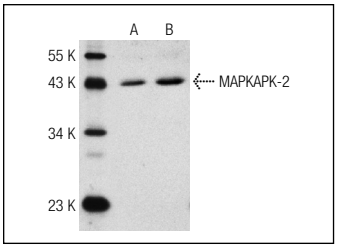
STORAGE

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

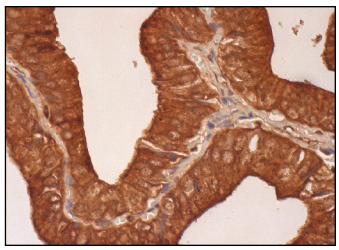
RESEARCH USE

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

DATA



MAPKAPK-2 (C-18): sc-6221. Western blot anlaysis of MAPKAPK-2 expression in A-431 (**A**) and Jurkat (**B**) whole cell lysates.



MAPKAPK-2 (C-18): sc-6221. Immunoperox-idase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear, cyto-plasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Kato, K., et al. 1998. Phosphorylation of αB-crystallin in mitotic cells and identification of enzymatic activities responsible for phosphorylation. J. Biol. Chem. 273: 28346-28354.
2. Werz, O., et al. 2001. Phorbol ester up-regulates capacities for nuclear translocation and phosphorylation of 5-lipoxygenase in mono Mac 6 cells and human polymorphonuclear leukocytes. Blood 97: 2487-2495.
3. Roberts, E.C., et al. 2002. Distinct cell cycle timing requirements for extracellular signal-regulated kinase and phosphoinositide 3-kinase signaling pathways in somatic cell mitosis. Mol. Cell. Biol. 22: 7226-7241.
4. Moriya, H., et al. 2006. *In vivo* robustness analysis of cell division cycle genes in *Saccharomyces cerevisiae*. PLoS Genet. 2: e111.
5. Yin, K.J., et al. 2006. Protein phosphatase 2A regulates bim expression via the Akt/FKHRL1 signaling pathway in amyloid-β peptide-induced cerebrovascular endothelial cell death. J. Neurosci. 26: 2290-2299.
6. Li, Z., et al. 2011. Differential DNA damage responses in p53 proficient and deficient cells: cisplatin-induced nuclear import of XPA is independent of ATR checkpoint in p53-deficient lung cancer cells. Int. J. Biochem. Mol. Biol. 2: 138-145.
7. Kolb, R.H., et al. 2012. ERK1/2 signaling plays an important role in topoisomerase II poison-induced G_2/M checkpoint activation. PLoS ONE 7: e50281.
8. Bobo, L.D., et al. 2013. MAPK-activated protein kinase 2 contributes to *Clostridium difficile*-associated inflammation. Infect. Immun. 81: 713-722.