SANTA CRUZ BIOTECHNOLOGY, INC.

MAPKAPK-2 (A-11): sc-393609

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.

REFERENCES

1. Sturgill, T.W., et al. 1988. Insulin-stimulated MAP2 kinase phosphorylates and activates Ribosomal Protein S6 kinase II. Nature 334: 715-718.
2. Stokoe, D., et al. 1992. MAPKAP kinase-2: a novel protein kinase activated by mitogen-activated protein kinase. EMBO J. 11: 3985-3994.
3. Davis, R.J. 1993. The mitogen-activated protein kinase signal transduction pathway. J. Biol. Chem. 268: 14553-14556.

CHROMOSOMAL LOCATION

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

SOURCE

MAPKAPK-2 (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 372-399 at the C-terminus of MAPKAPK-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MAPKAPK-2 (A-11) is available conjugated to agarose (sc-393609 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393609 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393609 PE), fluorescein (sc-393609 FITC), Alexa Fluor® 488 (sc-393609 AF488), Alexa Fluor® 546 (sc-393609 AF546), Alexa Fluor® 594 (sc-393609 AF594) or Alexa Fluor® 647 (sc-393609 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393609 AF680) or Alexa Fluor® 790 (sc-393609 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393609 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

MAPKAPK-2 (A-11) is recommended for detection of MAPKAPK-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

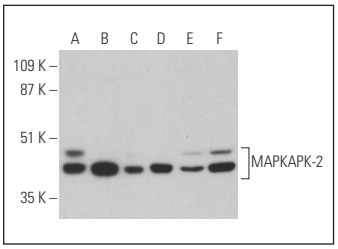
MAPKAPK-2 (A-11) is also recommended for detection of MAPKAPK-2 in additional species, including canine, bovine and porcine.

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.

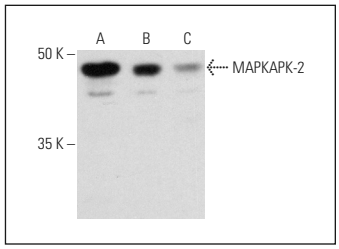
Molecular Weight of MAPKAPK-2: 45 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, RAW 264.7 whole cell lysate: sc-2211 or K-562 whole cell lysate: sc-2203.

DATA



MAPKAPK-2 (A-11) HRP: sc-393609 HRP. Direct western blot analysis of MAPKAPK-2 expression in Jurkat (**A**), HeLa (**B**), RAW 264.7 (**C**), PC-12 (**D**), A-431 (**E**) and K-562 (**F**) whole cell lysates.



MAPKAPK-2 (A-11): sc-393609. Western blot analysis of MAPKAPK-2 expression in RAW 264.7 (**A**), PC-12 (**B**) and NRK (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hornick, E.E., et al. 2018. Nlrp12 mediates adverse neutrophil recruitment during influenza virus infection. J. Immunol. 200: 1188-1197.
2. Bhardwaj, M., et al. 2020. Neophytadiene from *Turbinaria ornata* suppresses LPS-induced inflammatory response in RAW 264.7 macrophages and sprague dawley rats. Inflammation 43: 937-950.
3. Gong, P., et al. 2021. Proanthocyanidins protect against cadmium-induced diabetic nephropathy through p38 MAPK and Keap1/Nrf2 signaling pathways. Front. Pharmacol. 12: 801048.
4. Lenz, T. and Stühler, K. 2022. Small molecule arranged thermal proximity coaggregation (smarTPCA)-a novel approach to characterize protein-protein interactions in living cells by similar isothermal dose-responses. Int. J. Mol. Sci. 23: 5605.

RESEARCH USE

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