SANTA CRUZ BIOTECHNOLOGY, INC.

MAPKBP-1 (B-4): sc-514754

BACKGROUND

MAP kinases play a significant role in many biological processes, including cell adhesion and spreading, cell differentiation and apoptosis. MAPKBP-1 (mitogen-activated protein kinase binding protein 1), also known as JNKBP-1, is a 1,514 amino acid protein that contains 12 WD repeats. Induced by TRAF2 (TNF receptor-associated factor 2) and Tak1 (TGFβ-activated kinase 1), MAPKBP-1 is thought to act an adaptor protein for NFκB (nuclear factor κ-B) activation. MAPKBP-1 interacts with JNK3 and may promote TRAF2 polyubiquitination. MAPKBP-1 exists as six alternatively spliced variants and is encoded by a gene located on human chromosome 15. Human chromosome 15 houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

REFERENCES

1. Koyano, S., et al. 1999. A novel Jun N-terminal kinase (JNK)-binding protein that enhances the activation of JNK by MEK kinase 1 and TGFβ-activated kinase 1. FEBS Lett. 457: 385-388.
2. Cox, N.J., et al. 1999. Loci on chromosomes 2 (NIDDM1) and 15 interact to increase susceptibility to diabetes in Mexican Americans. Nat. Genet. 21: 213-215.
3. Khandoudi, N., et al. 2002. Rosiglitazone, a peroxisome proliferator-activated receptor-γ, inhibits the Jun NH_2-terminal kinase/activating protein 1 pathway and protects the heart from ischemia/reperfusion injury. Diabetes 51: 1507-1514.
4. Meng, W., et al. 2002. Structure of mitogen-activated protein kinase-activated protein (MAPKAP) kinase 2 suggests a bifunctional switch that couples kinase activation with nuclear export. J. Biol. Chem. 277: 37401-37405.

CHROMOSOMAL LOCATION

Genetic locus: MAPKBP1 (human) mapping to 15q15.1; Mapkbp1 (mouse) mapping to 2 E5.

SOURCE

MAPKBP-1 (B-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 48-61 near the N-terminus of MAPKBP-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-514754 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

MAPKBP-1 (B-4) is recommended for detection of MAPKBP-1 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).

Suitable for use as control antibody for MAPKBP-1 siRNA (h): sc-90268, MAPKBP-1 siRNA (m): sc-149261, MAPKBP-1 shRNA Plasmid (h): sc-90268-SH, MAPKBP-1 shRNA Plasmid (m): sc-149261-SH, MAPKBP-1 shRNA (h) Lentiviral Particles: sc-90268-V and MAPKBP-1 shRNA (m) Lentiviral Particles: sc-149261-V.

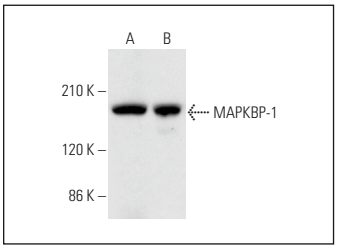
Molecular Weight of MAPKBP-1 isoforms: 164/134/150/109/24/163 kDa.

Positive Controls: mouse brain extract: sc-2253, mouse testis extract: sc-2405 or F9 cell lysate: sc-2245.

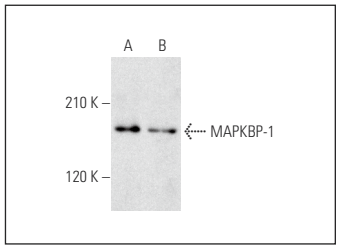
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MAPKBP-1 (B-4): sc-514754. Western blot analysis of MAPKBP-1 expression in mouse testis tissue extract (**A**) and F9 whole cell lysate (**B**).



MAPKBP-1 (B-4): sc-514754. Western blot analysis of MAPKBP-1 expression in mouse brain (**A**) and mouse skeletal muscle (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Gu, H., et al. 2018. The STAT3 target METTL8 regulates mouse ESC differentiation via inhibiting the JNK pathway. Stem Cell Reports 10: 1807-1820.

RESEARCH USE

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