SANTA CRUZ BIOTECHNOLOGY, INC.

TAO2 (H-8): sc-514254

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Several mammalian kinases have been identified with sequence similarity to the *Saccharomyces cerevisiae* serine/threonine kinase Ste20. Ste20 is involved in relaying signals from G protein-coupled receptors to cytosolic MAP kinase cascades, and it lies upstream of a MEK kinase. Thousand and one amino acid protein 2 (TAO2), also designated prostate-derived Ste20-like kinase 1 (PSK1) or kinase from chicken homolog C (KFC-C), belongs to the Ste20 subfamily of the Ser/Thr protein kinase family. TAO2 acts as an activator of the JNK MAP kinase pathway through the specific activation of MKK3 and MKK6 kinases. It is a multi-pass membrane protein detected in cytoplasmic vesicle membranes. TAO2 is ubiquitously expressed with highest levels found in brain and testis.

REFERENCES

1. Zhou, T., et al. 2004. Crystal structure of the TAO2 kinase domain: activation and specificity of a Ste20p MAP3K. Structure 12: 1891-1900.
2. Takekawa, M., et al. 2005. Conserved docking site is essential for activation of mammalian MAP kinase kinases by specific MAP kinase kinase kinases. Mol. Cell 18: 295-306.
3. Yustein, J.T., et al. 2003. Comparative studies of a new subfamily of human Ste20-like kinases: homodimerization, subcellular localization, and selective activation of MKK3 and p38. Oncogene 22: 6129-6141.
4. Moore, T.M., et al. 2000. PSK, a novel STE20-like kinase derived from prostatic carcinoma that activates the c-Jun N-terminal kinase mitogen-activated protein kinase pathway and regulates actin cytoskeletal organization. J. Biol. Chem. 275: 4311-4322.
5. Zhou, T.J., et al. 2006. Crystal structure of the MAP3K TAO2 kinase domain bound by an inhibitor staurosporine. Acta Biochim. Biophys. Sin. 38: 385-392.

CHROMOSOMAL LOCATION

Genetic locus: TAOK2 (human) mapping to 16p11.2; Taok2 (mouse) mapping to 7 F3.

SOURCE

TAO2 (H-8) is a mouse monoclonal antibody raised against amino acids 506-564 mapping within an internal region of TAO2 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

TAO2 (H-8) is recommended for detection of TAO2 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 TAO2 siRNA (h): sc-61642, TAO2 siRNA (m): sc-61643, TAO2 shRNA Plasmid (h): sc-61642-SH, TAO2 shRNA Plasmid (m): sc-61643-SH, TAO2 shRNA (h) Lentiviral Particles: sc-61642-V and TAO2 shRNA (m) Lentiviral Particles: sc-61643-V.

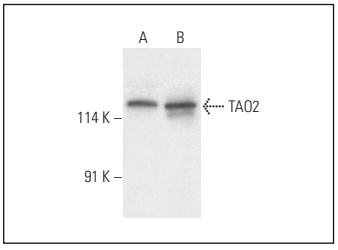
Molecular Weight of TAO2: 120 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, NTERA-2 cl.D1 whole cell lysate: sc-364181 or HL-60 whole cell lysate: sc-2209.

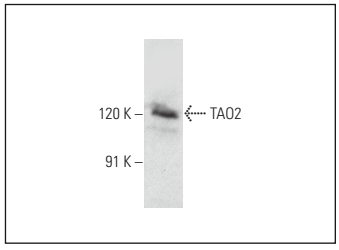
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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



TAO2 (H-8): sc-514254. Western blot analysis of TAO2 expression in HEK293 (**A**) and HL-60 (**B**) whole cell lysates.



TAO2 (H-8): sc-514254. Western blot analysis of TAO2 expression in NTERA-2 cl.D1 whole cell lysate.

RESEARCH USE

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