SANTA CRUZ BIOTECHNOLOGY, INC.

TAO2 (C-2): sc-514268

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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. 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.
2. 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.
3. Zhou, T., et al. 2004. Crystal structure of the TAO2 kinase domain: activation and specificity of a Ste20p MAP3K. Structure 12: 1891-1900.
4. 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.
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 (C-2) 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 IgM 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 (C-2) 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.

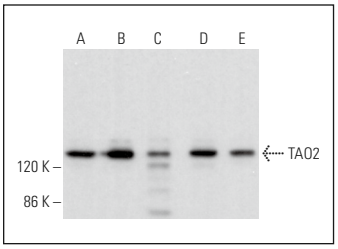
Molecular Weight of TAO2: 120 kDa.

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

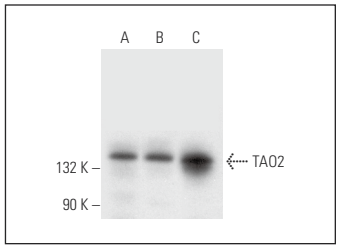
RECOMMENDED SUPPORT REAGENTS

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



TAO2 (C-2): sc-514268. Western blot analysis of TAO2 expression in NTERA-2 cl.D1 (**A**), HEK293 (**B**), HL-60 (**C**), Hep G2 (**D**) and WI-38 (**E**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



TAO2 (C-2): sc-514268. Western blot analysis of TAO2 expression in NTERA-2 cl.D1 (**A**), HEK293 (**B**) and HL-60 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Quereda, J.J., et al. 2020. A role for Taok2 in *Listeria monocytogenes* vacuolar escape. J. Infect. Dis. E-published.

RESEARCH USE

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