

# TAO2 (C-2): sc-514268

## 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

- 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.
- 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.
- Zhou, T., et al. 2004. Crystal structure of the TAO2 kinase domain: activation and specificity of a Ste20p MAP3K. *Structure* 12: 1891-1900.
- Takekawa, M., et al. 2005. Conserved docking site is essential for activation of mammalian MAP kinase kinases by specific MAP kinase kinases. *Mol. Cell* 18: 295-306.
- 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: TAO2 (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](http://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.

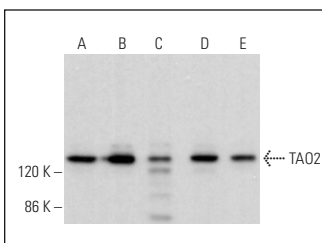
Molecular Weight of TAO2: 120 kDa.

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.

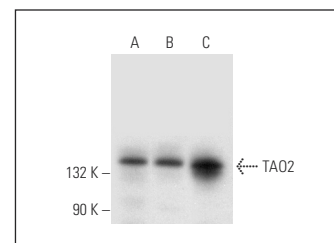
## RECOMMENDED SUPPORT REAGENTS

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

- 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.