

# PSK2 (22): sc-136094

## BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. PSK2 (Prostate-derived STE20-like kinase 2), also known as TAOK1 (TAO kinase 1), TAO1 (thousand and one amino acid protein 1), hKFC-B (kinase from chicken homolog B), MARKK or MAP3K16, is a member of the Ser/Thr protein kinase family and belongs to the GCK-like class of STE20-like kinases. Expressed at high levels in testis and at lower levels in placenta, colon, brain and skeletal muscle, PSK2 localizes to the cytoplasm and phosphorylates MEK-3, thereby activating the p38 MAP kinase pathway. In addition, PSK2 is capable of activating JNK and inducing JNK-dependent morphological changes that lead to apoptosis. Upon activation of caspases, PSK2 is cleaved by caspase-3.

## REFERENCES

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- Timm, T., et al. 2003. MARKK, a Ste20-like kinase, activates the polarity-inducing kinase MARK/PAR-1. EMBO J. 22: 5090-5101.
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## CHROMOSOMAL LOCATION

Genetic locus: TAOK1 (human) mapping to 17q11.2; Taok1 (mouse) mapping to 11 B5.

## SOURCE

PSK2 (22) is a mouse monoclonal antibody raised against amino acids 352-550 of PSK2 of rat origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

PSK2 (22) is recommended for detection of PSK2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for PSK2 siRNA (h): sc-76267, PSK2 siRNA (m): sc-76268, PSK2 shRNA Plasmid (h): sc-76267-SH, PSK2 shRNA Plasmid (m): sc-76268-SH, PSK2 shRNA (h) Lentiviral Particles: sc-76267-V and PSK2 shRNA (m) Lentiviral Particles: sc-76268-V.

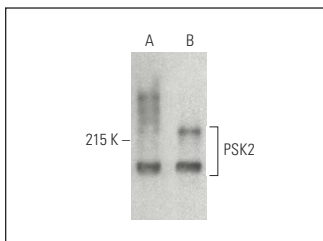
Molecular Weight of PSK2: 150 kDa.

Positive Controls: rat brain extract: sc-2392, HeLa whole cell lysate: sc-2200 or mouse brain extract: sc-2253.

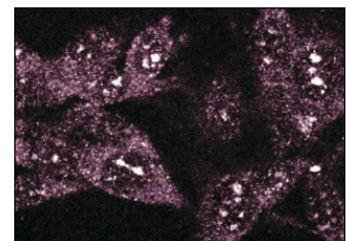
## RECOMMENDED SUPPORT REAGENTS

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



PSK2 (22): sc-136094. Western blot analysis of PSK2 expression in rat brain (A) and mouse brain (B) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



PSK2 (22): sc-136094. Immunofluorescence staining of RSV-3T3 cells showing cytoplasmic localization.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.