SANTA CRUZ BIOTECHNOLOGY, INC.

TSSK 4 (N-14): sc-165814

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TSSK 4 (testis-specific serine/threonine-protein kinase 4) is a 328 amino acid member of the CAMK Ser/Thr protein kinase family and contains 1 protein kinase domain. TSSK 4 is believed to be involved in a signaling pathway during male germ cell development and functionality of mature sperm. TSSK 4 is also believed to phosphorylate CREB1 on Ser 133 and stimulate downstream signaling. TSSK 4 may also operate with a functional magnesium cofactor. Possibly through autophosphorylation, TSSK 4 is activated by phosphorylation on Thr 197. TSSK 4 has only been shown expressed in testis.

REFERENCES

1. Koshida, K., Stigbrand, T., Hisazumi, H. and Wahren, B. 1989. Hydrophobicity and lectin affinity of alkaline phosphatase isozymes in seminoma and normal testis. Tumour Biol. 10: 173-180.
2. Bielke, W., Blaschke, R.J., Miescher, G.C., Zürcher, G., Andres, A.C. and Ziemiecki, A. 1994. Characterization of a novel murine testis-specific serine/threonine kinase. Gene 139: 235-239.
3. Xu, B., Hao, Z., Jha, K.N., Digilio, L., Urekar, C., Kim, Y.H., Pulido, S., Flickinger, C.J. and Herr, J.C. 2007. Validation of a testis specific serine/threonine kinase [TSSK] family and the substrate of TSSK1 & 2, TSKS, as contraceptive targets. Soc. Reprod. Fertil. Suppl. 63: 87-101.
4. Zeng, M., Deng, W., Wang, X., Qiu, W., Liu, Y., Sun, H., Tao, D., Zhang, S. and Ma, Y. 2008. DAZL binds to the transcripts of several Tssk genes in germ cells. BMB Rep. 41: 300-304.
5. Su, D., Zhang, W., Yang, Y., Deng, Y., Ma, Y., Song, H. and Zhang, S. 2008. Mutation screening and association study of the TSSK4 gene in Chinese infertile men with impaired spermatogenesis. J. Androl. 29: 374-378.
6. Zhang, H., Su, D., Yang, Y., Zhang, W., Liu, Y., Bai, G., Ma, M., Ma, Y. and Zhang, S. 2010. Some single-nucleotide polymorphisms of the TSSK2 gene may be associated with human spermatogenesis impairment. J. Androl. 31: 388-392.

CHROMOSOMAL LOCATION

Genetic locus: TSSK4 (human) mapping to 14q12; Tssk4 (mouse) mapping to 14 C3.

SOURCE

TSSK 4 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TSSK 4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-165814 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

TSSK 4 (N-14) is recommended for detection of TSSK 4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other TSSK family members.

TSSK 4 (N-14) is also recommended for detection of TSSK 4 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for TSSK 4 siRNA (h): sc-92098, TSSK 4 siRNA (m): sc-154743, TSSK 4 shRNA Plasmid (h): sc-92098-SH, TSSK 4 shRNA Plasmid (m): sc-154743-SH, TSSK 4 shRNA (h) Lentiviral Particles: sc-92098-V and TSSK 4 shRNA (m) Lentiviral Particles: sc-154743-V.

Molecular Weight of TSSK 4: 35 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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