

TSSK 2 (S-09): sc-100437

BACKGROUND

TSSK 2 (testis-specific serine kinase 2), also known as DGS-G (DiGeorge syndrome protein G), SPOGA2 or STK22B (serine/threonine-protein kinase 22B), is a testis-specific serine/threonine kinase that belongs to the CAMK serine/threonine-protein kinase family. Localizing to the cytoplasm, TSSK 2 contains one protein kinase domain and is believed to play a role in the late stages of spermatogenesis. TSSK 2 shares 83% amino acid identity with the related protein kinase TSSK 1. Specifically, TSSK 2 uses magnesium as a cofactor and catalyzes the transfer of a phosphate from ATP to a target protein, such as SPAG16. Loss of TSSK 2 due to chromosomal deletion has been implicated in velocardiofacial/DiGeorge syndrome (VCFS/DGS), a disorder of development that is characterized by palate anomalies, facial anomalies, immunodeficiency, conotruncal cardiac malformations and hypocalcemia.

REFERENCES

1. Kueng, P., Nikolova, Z., Djonov, V., Hemphill, A., Rohrbach, V., Boehlen, D., Zuercher, G., Andres, A.C. and Ziemiecki, A. 1997. A novel family of serine/threonine kinases participating in spermiogenesis. *J. Cell Biol.* 139: 1851-1859.
2. Zuercher, G., Rohrbach, V., Andres, A.C. and Ziemiecki, A. 2000. A novel member of the testis specific serine kinase family, TSSK 3, expressed in the Leydig cells of sexually mature mice. *Mech. Dev.* 93: 175-177.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610710. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Hao, Z., Jha, K.N., Kim, Y.H., Vemuganti, S., Westbrook, V.A., Chertihin, O., Markgraf, K., Flickinger, C.J., Coppola, M., Herr, J.C. and Visconti, P.E. 2004. Expression analysis of the human testis-specific serine/threonine kinase (TSSK) homologues. A TSSK member is present in the equatorial segment of human sperm. *Mol. Hum. Reprod.* 10: 433-444.
5. 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.

CHROMOSOMAL LOCATION

Genetic locus: TSSK2 (human) mapping to 22q11.21.

SOURCE

TSSK 2 (S-09) is a mouse monoclonal antibody raised against recombinant TSSK 2 of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 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.

APPLICATIONS

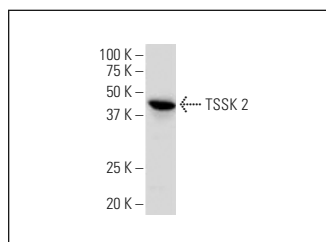
TSSK 2 (S-09) is recommended for detection of TSSK 2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 TSSK 2 siRNA (h): sc-76768, TSSK 2 shRNA Plasmid (h): sc-76768-SH and TSSK 2 shRNA (h) Lentiviral Particles: sc-76768-V.

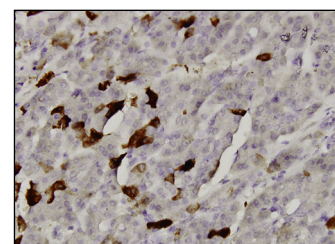
Molecular Weight of TSSK 2: 41 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

DATA



TSSK 2 (S-09): sc-100437. Western blot analysis of TSSK 2 expression in HeLa whole cell lysate.



TSSK 2 (S-09): sc-100437. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human pancreas tissue showing cytoplasmic localization.

RESEARCH USE

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

PROTOCOLS

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