SANTA CRUZ BIOTECHNOLOGY, INC.

TSSK 6 (F-6): sc-514076

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. TSSK 6 (testis-specific serine kinase 6), also known as SSTK, TSSK4, FKSG82 or CT72, is a 273 amino acid protein that contains one protein kinase domain and belongs to the Ser/Thr protein kinase family. Highly expressed in testis with lower expression in ovary, colon, thymus, small intestine and spleen, TSSK 6 catalyzes the ATP-dependent phosphorylation of proteins involved in sperm production and chromatin remodeling. TSSK 6 uses magnesium as a cofactor and is thought to be required for proper sperm development and function, as well as DNA condensation events. Defects in the gene encoding TSSK 6 are associated with male infertility characterized by low sperm count and decreased sperm motility.

REFERENCES

1. Hanks, S.K., et al. 1988. The protein kinase family: conserved features and deduced phylogeny of the catalytic domains. Science 241: 42-52.
2. Hanks, S.K. and Hunter, T. 1995. Protein kinases 6. The eukaryotic protein kinase superfamily: kinase (catalytic) domain structure and classification. FASEB J. 9: 576-596.
3. Green, G.R. 2001. Phosphorylation of histone variant regions in chromatin: unlocking the linker? Biochem. Cell Biol. 79: 275-287.

CHROMOSOMAL LOCATION

Genetic locus: TSSK6 (human) mapping to 19p13.11; Tssk6 (mouse) mapping to 8 B3.3.

SOURCE

TSSK 6 (F-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 243-265 near the C-terminus of TSSK 6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TSSK 6 (F-6) is available conjugated to agarose (sc-514076 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514076 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514076 PE), fluorescein (sc-514076 FITC), Alexa Fluor® 488 (sc-514076 AF488), Alexa Fluor® 546 (sc-514076 AF546), Alexa Fluor® 594 (sc-514076 AF594) or Alexa Fluor® 647 (sc-514076 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514076 AF680) or Alexa Fluor® 790 (sc-514076 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514076 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

TSSK 6 (F-6) is recommended for detection of TSSK 6 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 TSSK 6 siRNA (h): sc-97616, TSSK 6 siRNA (m): sc-154745, TSSK 6 shRNA Plasmid (h): sc-97616-SH, TSSK 6 shRNA Plasmid (m): sc-154745-SH, TSSK 6 shRNA (h) Lentiviral Particles: sc-97616-V and TSSK 6 shRNA (m) Lentiviral Particles: sc-154745-V.

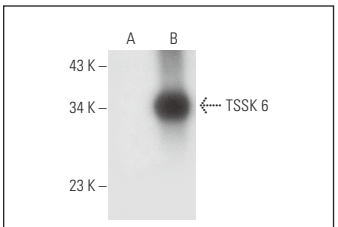
Molecular Weight of TSSK 6: 33 kDa.

Positive Controls: TSSK 6 (m): 293T Lysate: sc-179634.

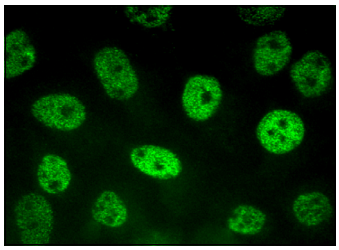
RECOMMENDED SUPPORT REAGENTS

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



TSSK 6 (F-6): sc-514076. Western blot analysis of TSSK 6 expression in non-transfected: sc-117752 (**A**) and mouse TSSK 6 transfected: sc-179634 (**B**) 293T whole cell lysates.



TSSK 6 (F-6): sc-514076. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Martinez, G., et al. 2023. Cytochalasin D restores nuclear size acting on F-Actin and IZUMO1 localization in low-quality spermatozoa. Int. J. Biol. Sci. 19: 2234-2255.

STORAGE

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