

# TSKS (E-21): sc-130904

## BACKGROUND

TSKS (testis-specific kinase substrate), also known as STK22S1 and TSKS1, is a 592 amino acid protein that is highly expressed in human testicular tissue. Low levels of TSKS are detectable in prostate, placenta, fetal liver, thymus and mammary gland tissues. TSKS is found to be downregulated in cancerous testicular tissue from seminoma, teratocarcinoma, embryonal and Leydig cell tumors concurrently with high expression in neighboring premalignant carcinoma. TSKS protein contains an N-terminal signal peptide, but does not contain a transmembrane region. TSKS has many potential phosphorylation and glycosylation sites and is phosphorylated by soluble recombinant TSSK2 *in vitro*. It is thought that TSKS likely plays a physiological role in spermatogenesis or spermiogenesis.

## REFERENCES

1. 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.
2. 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.
3. Scorilas, A., Yousef, G.M., Jung, K., Rajpert-De Meyts, E., Carsten, S. and Diamandis, E.P. 2001. Identification and characterization of a novel human testis-specific kinase substrate gene which is downregulated in testicular tumors. *Biochem. Biophys. Res. Commun.* 285: 400-408.
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: TSKS (human) mapping to 19q13.33.

## SOURCE

TSKS (E-21) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of TSKS of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml 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

TSKS (E-21) is recommended for detection of TSKS 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 TSKS siRNA (h): sc-97664, TSKS shRNA Plasmid (h): sc-97664-SH and TSKS shRNA (h) Lentiviral Particles: sc-97664-V.

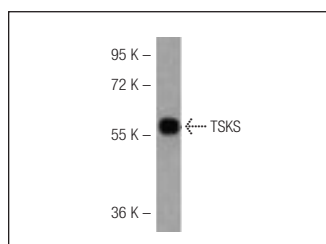
Molecular Weight of TSKS: 65 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209.

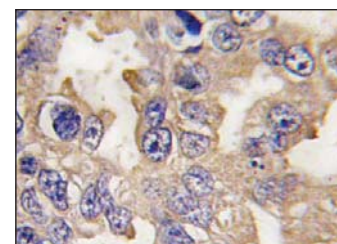
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



TSKS (E-21): sc-130904. Western blot analysis of TSKS expression in HL-60 whole cell lysate.



TSKS (E-21): sc-130904. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lung carcinoma tissue showing cytoplasmic and membrane localization.

## RESEARCH USE

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

## PROTOCOLS

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