

TESK1 (E-16): sc-82370

BACKGROUND

TESK1 (testis-specific kinase 1) is a 626 amino acid serine/threonine kinase that belongs to the protein kinase superfamily and contains a unique structure composed of a N-terminal protein kinase domain and a C-terminal proline-rich domain. The protein kinase domain of TESK1 is most closely related to those of the LIM motif-containing protein kinases (LIMKs). Functioning as a dual-specificity protein kinase, TESK1 catalyzes the ATP-dependent phosphorylation of exogenous substrates and autophosphorylation on tyrosine and serine/threonine residues, thereby mediating intracellular signal transduction pathways. Predominantly expressed in testicular germ cells, TESK1 may play an important role in spermatogenesis.

REFERENCES

1. Toshima, J., Ohashi, K., Okano, I., Nunoue, K., Kishioka, M., Kuma, K., Miyata, T., Hirai, M., Baba, T. and Mizuno, K. 1995. Identification and characterization of a novel protein kinase, TESK1, specifically expressed in testicular germ cells. *J. Biol. Chem.* 270: 31331-31337.
2. Toshima, J., Koji, T. and Mizuno, K. 1998. Stage-specific expression of testis-specific protein kinase 1 (TESK1) in rat spermatogenic cells. *Biochem. Biophys. Res. Commun.* 249: 107-112.
3. Toshima, J., Nakagawara, K., Mori, M., Noda, T. and Mizuno, K. 1998. Structural organization and chromosomal localization of the mouse TESK1 (testis-specific protein kinase 1) gene. *Gene* 206: 237-245.
4. Toshima, J., Tanaka, T. and Mizuno, K. 1999. Dual specificity protein kinase activity of testis-specific protein kinase 1 and its regulation by autophosphorylation of serine-215 within the activation loop. *J. Biol. Chem.* 274: 12171-12176.
5. Toshima, J., Toshima, J.Y., Suzuki, M., Noda, T. and Mizuno, K. 2001. Cell-type-specific expression of a TESK1 promoter-linked lacZ gene in transgenic mice. *Biochem. Biophys. Res. Commun.* 286: 566-573.
6. Toshima, J.Y., Toshima, J., Watanabe, T. and Mizuno, K. 2001. Binding of 14-3-3 β regulates the kinase activity and subcellular localization of testicular protein kinase 1. *J. Biol. Chem.* 276: 43471-43481.

CHROMOSOMAL LOCATION

Genetic locus: TESK1 (human) mapping to 9p13.3; Tesk1 (mouse) mapping to 4 B1.

SOURCE

TESK1 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TESK1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-82370 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TESK1 (E-16) is recommended for detection of TESK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with family member TESK2.

TESK1 (E-16) is also recommended for detection of TESK1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TESK1 siRNA (h): sc-76642, TESK1 siRNA (m): sc-76643, TESK1 shRNA Plasmid (h): sc-76642-SH, TESK1 shRNA Plasmid (m): sc-76643-SH, TESK1 shRNA (h) Lentiviral Particles: sc-76642-V and TESK1 shRNA (m) Lentiviral Particles: sc-76643-V.

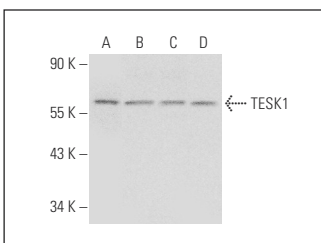
Molecular Weight of TESK1: 68 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, MCF7 whole cell lysate: sc-2206 or HEK293 whole cell lysate: sc-45136.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



TESK1 (E-16): sc-82370. Western blot analysis of TESK1 expression in K-562 (A), MCF7 (B), HEK293 (C) and Jurkat (D) whole cell lysates.

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.