SANTA CRUZ BIOTECHNOLOGY, INC.

TEX14 (4E4): sc-517070

BACKGROUND

TEX14 (testis expressed 14), also known as SGK307 (sugen kinase 307) or Protein kinase-like protein SgK307, is a 1,497 amino acid protein that belongs to the protein kinase superfamily and is expressed in testis. The gene encoding TEX14 is located on chromosome 17 and is required for spermatogenesis and normal structure of the intercellular bridge that connects spermatocytes and spermatogonia. TEX14 co-localizes with the centralspindlin complex, MKLP-1 (mitotic kinesin-like protein 1) and male germ cell Rac GTPase (Rac GTPase-activating protein) and converts these midbody matrix proteins into stable intercellular bridge components. TEX14 contains three ANK repeats and one protein kinase domain. Three isoforms exist due to alternative splicing events.

REFERENCES

1. Wang, P.J., et al. 2001. An abundance of X-linked genes expressed in spermatogonia. Nat. Genet. 27: 422-426.
2. Wu, M.H., et al. 2003. Sequence and expression of testis-expressed gene 14 (TEX14): a gene encoding a protein kinase preferentially expressed during spermatogenesis. Gene Expr. Patterns 3: 231-236.
3. Greenbaum, M.P., et al. 2009. Mouse TEX14 is required for embryonic germ cell intercellular bridges but not female fertility. Biol. Reprod. 80: 449-457.

CHROMOSOMAL LOCATION

Genetic locus: TEX14 (human) mapping to 17q22; Tex14 (mouse) mapping to 11 C.

SOURCE

TEX14 (4E4) is a mouse monoclonal antibody raised against amino acids 1392-1491 representing partial length TEX14 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TEX14 (4E4) is recommended for detection of TEX14 of mouse, rat and 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TEX14 siRNA (h): sc-94144, TEX14 siRNA (m): sc-154214, TEX14 shRNA Plasmid (h): sc-94144-SH, TEX14 shRNA Plasmid (m): sc-154214-SH, TEX14 shRNA (h) Lentiviral Particles: sc-94144-V and TEX14 shRNA (m) Lentiviral Particles: sc-154214-V.

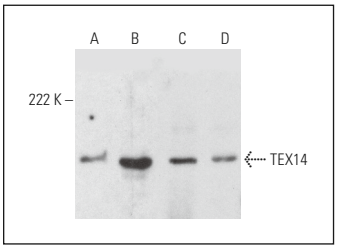
Molecular Weight of TEX14 isoforms: 168/162 kDa.

Positive Controls: F9 cell lysate: sc-2245, mouse testis extract: sc-2405 or rat testis extract: sc-2400.

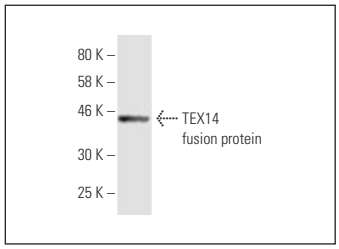
RECOMMENDED SUPPORT REAGENTS

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).

DATA



TEX14 (4E4): sc-517070. Western blot analysis of TEX14 expression in Hs 181 Tes (**A**) and F9 (**B**) whole cell lysates and mouse testis (**C**) and rat testis (**D**) tissue extracts.



TEX14 (4E4): sc-517070. Western blot analysis of human recombinant TEX14 fusion protein.

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.

PROTOCOLS

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