

TCP-11 (G-13): sc-162305

BACKGROUND

TCP-11 (t-complex protein 11), also known as D6S230E, is a 503 amino acid single-pass membrane protein expressed only in fertile adult testis and is a member of the TCP-11 family. Localized to the surface of mature epididymal spermatozoa, TCP-11 may be a receptor for the fertilization promoting peptide (FPP), a peptide produced by the prostate gland and then secreted into seminal plasma. The adenylate cyclase/cyclic AMP pathway is considered to be the signal transduction pathway that is activated by the association between FPP and TCP-11. TCP-11 is suggested to play a critical role in the regulation of sperm function and fertility. The gene encoding TCP-11 is located on human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Three isoforms of TCP-11 are produced by alternative splicing events.

REFERENCES

1. Ragoussis, J., et al. 1992. A testis-expressed Zn finger gene (ZNF76) in human 6p21.3 centromeric to the MHC is closely linked to the human homolog of the t-complex gene TCP-11. *Genomics* 14: 673-679.
2. Hosseini, R., et al. 1994. The mouse t-complex gene, *Tcp-11*, is under translational control. *Mech. Dev.* 47: 73-80.
3. Fraser, L.R., et al. 1997. TCP-11, the product of a mouse t-complex gene, plays a role in stimulation of capacitation and inhibition of the spontaneous acrosome reaction. *Mol. Reprod. Dev.* 48: 375-382.
4. Fraser, L.R. 1998. The modulation of sperm function by fertilization promoting peptide. *Hum. Reprod.* 13: 1-10.
5. Adeoya-Osiguwa, S.A., et al. 1998. FPP modulates mammalian sperm function via TCP-11 and the adenylyl cyclase/cAMP pathway. *Mol. Reprod. Dev.* 51: 468-476.
6. Fraser, L.R., et al. 1999. Modulation of adenylyl cyclase by FPP and adenosine involves stimulatory and inhibitory adenosine receptors and g proteins. *Mol. Reprod. Dev.* 53: 459-471.
7. Ma, Y., et al. 2002. Molecular characterization of the TCP11 gene which is the human homologue of the mouse gene encoding the receptor of fertilization promoting peptide. *Mol. Hum. Reprod.* 8: 24-31.
8. Safronova, L.D., et al. 2002. Sterility of males determined by functional features of the mouse spermatozoa bearing t-complex. *Ontogenez* 33: 165-169.
9. Ma, Y.X., et al. 2003. Cloning, expression, and alternative splicing of the novel isoform of hTCP11 gene. *Zhongguo Yi Xue Ke Xue Yuan Xue Bao* 25: 122-128.

CHROMOSOMAL LOCATION

Genetic locus: TCP11 (human) mapping to 6p21.31.

SOURCE

TCP-11 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TCP-11 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-162305 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TCP-11 (G-13) is recommended for detection of TCP-11 of human and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other TCP family members.

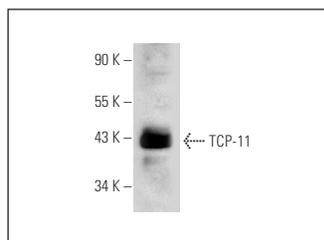
TCP-11 (G-13) is also recommended for detection of TCP-11 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for TCP-11 siRNA (h): sc-95303, TCP-11 shRNA Plasmid (h): sc-95303-SH and TCP-11 shRNA (h) Lentiviral Particles: sc-95303-V.

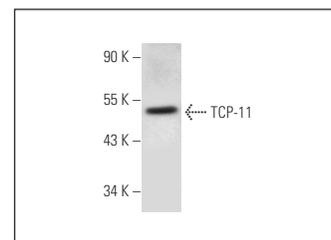
Molecular Weight of TCP-11: 49-56 kDa.

Positive Controls: rat testis extract: sc-2400, human liver extract: sc-363766 or human PBL whole cell lysate.

DATA



TCP-11 (G-13): sc-162305. Western blot analysis of TCP-11 expression in human PBL whole cell lysate.



TCP-11 (G-13): sc-162305. Western blot analysis of TCP-11 expression in human liver tissue extract.

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 or our catalog for detailed protocols and support products.