

TSCOT (H-96): sc-292017

BACKGROUND

TSCOT (thymic stromal cotransporter homolog) is a 475 amino acid multi-pass membrane protein that belongs to the SLC46A family. TSCOT is believed to act as a cell membrane transporter and is likely to be found glycosylated. TSCOT is encoded by a gene that maps to human chromosome 9, which consists of about 145 million bases and 4% of the human genome and encodes nearly 900 genes. Considered to play a role in gender determination, deletion of the distal portion of 9p can lead to development of male to female sex reversal, the phenotype of a female with a male X,Y genotype. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, is associated with the chromosome 9 gene encoding endoglin protein, ENG. Familial dysautonomia is also associated with chromosome 9 through the gene IKBKAP. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

- Chen, C., Kim, M.G., Soo Lyu, M., Kozak, C.A., Schwartz, R.H. and Flomerfelt, F.A. 2000. Characterization of the mouse gene, human promoter and human cDNA of TSCOT reveals strong interspecies homology. *Biochim. Biophys. Acta* 1493: 159-169.
- Kim, M.G., Flomerfelt, F.A., Lee, K.N., Chen, C. and Schwartz, R.H. 2000. A putative 12 transmembrane domain cotransporter expressed in thymic cortical epithelial cells. *J. Immunol.* 164: 3185-3192.
- Obermann, H., Wingbermühle, A., Münz, S. and Kirchhoff, C. 2003. A putative 12-transmembrane domain cotransporter associated with apical membranes of the epididymal duct. *J. Androl.* 24: 542-556.
- Yang, S.J., Ahn, S., Park, C.S., Choi, S. and Kim, M.G. 2005. Identifying subpopulations of thymic epithelial cells by flow cytometry using a new specific thymic epithelial marker, Ly110. *J. Immunol. Methods* 297: 265-270.
- Engelmark, M.T., Ivansson, E.L., Magnusson, J.J., Gustavsson, I.M., Beskow, A.H., Magnusson, P.K. and Gyllensten, U.B. 2006. Identification of susceptibility loci for cervical carcinoma by genome scan of affected sib-pairs. *Hum. Mol. Genet.* 15: 3351-3360.
- Engelmark, M.T., Ivansson, E.L., Magnusson, J.J., Gustavsson, I.M., Wyöni, P.I., Ingman, M., Magnusson, P.K. and Gyllensten, U.B. 2008. Polymorphisms in 9q32 and TSCOT are linked to cervical cancer in affected sib-pairs with high mean age at diagnosis. *Hum. Genet.* 123: 437-443.

CHROMOSOMAL LOCATION

Genetic locus: SLC46A2 (human) mapping to 9q32; Slc46a2 (mouse) mapping to 4 B3.

SOURCE

TSCOT (H-96) is a rabbit polyclonal antibody raised against amino acids 137-232 mapping within an internal region of TSCOT 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.

APPLICATIONS

TSCOT (H-96) is recommended for detection of TSCOT 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)], 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).

TSCOT (H-96) is also recommended for detection of TSCOT in additional species, including equine, canine and porcine.

Suitable for use as control antibody for TSCOT siRNA (h): sc-92745, TSCOT siRNA (m): sc-154712, TSCOT shRNA Plasmid (h): sc-92745-SH, TSCOT shRNA Plasmid (m): sc-154712-SH, TSCOT shRNA (h) Lentiviral Particles: sc-92745-V and TSCOT shRNA (m) Lentiviral Particles: sc-154712-V.

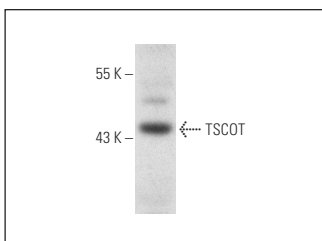
Molecular Weight of TSCOT: 51 kDa.

Positive Controls: A549 cell lysate: sc-2413.

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.

DATA



TSCOT (H-96): sc-292017. Western blot analysis of TSCOT expression in A549 whole cell lysate.

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.