

TDRD3 (C-20): sc-84626

BACKGROUND

TDRD3 (tudor domain containing 3) is a 651 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one UBA domain and one tudor domain. Expressed in lung, brain, heart, liver, placenta, kidney, pancreas and skeletal muscle, TDRD3 exists as a component of mRNA stress granules and is thought to play a role in the translation of target mRNAs, as well as in the assembly and disassembly of stress granules. Multiple isoforms of TDRD3 exist due to alternative splicing events. The gene encoding TDRD3 maps to human chromosome 13, which houses over 400 genes, such as BRCA2 and RB1, and comprises nearly 4% of the human genome. Trisomy 13, also known as Patau syndrome, is deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

REFERENCES

1. Côté, J. and Richard, S. 2005. Tudor domains bind symmetrical dimethylated arginines. *J. Biol. Chem.* 280: 28476-28483.
2. Anderson, P. and Kedersha, N. 2006. RNA granules. *J. Cell Biol.* 172: 803-808.
3. Kedersha, N. and Anderson, P. 2007. Mammalian stress granules and processing bodies. *Methods Enzymol.* 431: 61-81.
4. Bugge, M., et al. 2007. Non-disjunction of chromosome 13. *Hum. Mol. Genet.* 16: 2004-2010.
5. Hall, H.E., et al. 2007. The origin of trisomy 13. *Am. J. Med. Genet. A* 143A: 2242-2248.
6. Goulet, I., et al. 2008. TDRD3, a novel Tudor domain-containing protein, localizes to cytoplasmic stress granules. *Hum. Mol. Genet.* 17: 3055-3074.
7. Linder, B., et al. 2008. TDRD3 is a novel stress granule-associated protein interacting with the Fragile-X syndrome protein FMRP. *Hum. Mol. Genet.* 17: 3236-3246.
8. Anderson, P. and Kedersha, N. 2008. Stress granules: the Tao of RNA triage. *Trends Biochem. Sci.* 33: 141-150.

CHROMOSOMAL LOCATION

Genetic locus: TDRD3 (human) mapping to 13q21.2; Tdr3 (mouse) mapping to 14 E1.

SOURCE

TDRD3 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of TDRD3 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84626 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

TDRD3 (C-20) is recommended for detection of TDRD3 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), 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).

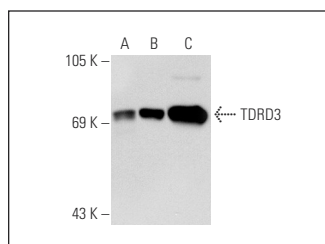
TDRD3 (C-20) is also recommended for detection of TDRD3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TDRD3 siRNA (h): sc-76639, TDRD3 siRNA (m): sc-154165, TDRD3 shRNA Plasmid (h): sc-76639-SH, TDRD3 shRNA Plasmid (m): sc-154165-SH, TDRD3 shRNA (h) Lentiviral Particles: sc-76639-V and TDRD3 shRNA (m) Lentiviral Particles: sc-154165-V.

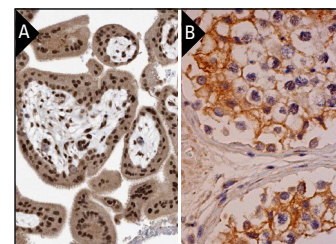
Molecular Weight of TDRD3: 73 kDa.

Positive Controls: TDRD3 (h2): 293T Lysate: sc-129928, Jurkat whole cell lysate: sc-2204 or HT-1080 whole cell lysate: sc-364183.

DATA



TDRD3 (C-20): sc-84626. Western blot analysis of TDRD3 expression in non-transfected 293T: sc-117752 (A), human TDRD3 transfected 293T: sc-129928 (B) and Jurkat (C) whole cell lysates.



TDRD3 (C-20): sc-84626. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta showing nuclear and cytoplasmic staining of decidual and trophoblastic cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells (B).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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