

TDRD5 (N-15): sc-244280

BACKGROUND

TDRD5 (tudor domain-containing protein 5) is a 981 amino acid cytoplasmic protein that belongs to the TDRD5 family. Existing as two alternatively spliced isoforms, TDRD5 contains three Lotus/OST-HTH domains and one Tudor domain. Essential for germline integrity, TDRD5 is involved in repressing the mobilization of transposable elements during spermiogenesis. To carry out its job in the repression of transposable elements, TDRD5 most likely acts through the piRNA metabolic process during meiosis, which forms complexes composed of piRNA and PIWI proteins and govern the methylation and subsequent repression of transposons. TDRD5 is also thought to be necessary for chromatoid body (CB) assembly, as it localizes to CB and π -body. The gene that encodes TDRD5 consists of nearly 100,000 bases and maps to human chromosome 1q25.2.

REFERENCES

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- Chen, C., et al. 2009. Mouse Piwi interactome identifies binding mechanism of Tdrkh Tudor domain to arginine methylated Miwi. *Proc. Natl. Acad. Sci. USA* 106: 20336-20341.
- Callebaut, I. and Morion, J.P. 2010. LOTUS, a new domain associated with small RNA pathways in the germline. *Bioinformatics* 26: 1140-1144.
- Anantharaman, V., et al. 2010. OST-HTH: a novel predicted RNA-binding domain. *Biol. Direct* 5: 13.
- Kirino, Y., et al. 2010. Arginine methylation of Aubergine mediates Tudor binding and germ plasm localization. *RNA* 16: 70-78.
- Yabuta, Y., et al. 2011. TDRD5 is required for retrotransposon silencing, chromatoid body assembly, and spermiogenesis in mice. *J. Cell Biol.* 192: 781-795.

CHROMOSOMAL LOCATION

Genetic locus: TDRD5 (human) mapping to 1q25.2; Tdrd5 (mouse) mapping to 1 G3.

SOURCE

TDRD5 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TDRD5 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-244280 P, (100 μ g 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

TDRD5 (N-15) is recommended for detection of TDRD5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 TDRD family members.

TDRD5 (N-15) is also recommended for detection of TDRD5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TDRD5 siRNA (h): sc-78974, TDRD5 siRNA (m): sc-154166, TDRD5 shRNA Plasmid (h): sc-78974-SH, TDRD5 shRNA Plasmid (m): sc-154166-SH, TDRD5 shRNA (h) Lentiviral Particles: sc-78974-V and TDRD5 shRNA (m) Lentiviral Particles: sc-154166-V.

Molecular Weight of TDRD5 isoforms: 116/110 kDa.

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) 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.

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.