

TDRKH (N-16): sc-139559

BACKGROUND

TDRKH (tudor and KH domain-containing protein), also known as TDRD2 (tudor domain-containing protein 2), is a 561 amino acid protein that contains 2 KH domains and one tudor domain. TDRKH exists as two alternatively spliced isoforms and interacts with HIWI and HILI2. The gene that encodes TDRKH contains roughly 21,310 bases and maps to human chromosome 1q21.3. With roughly 3,000 genes that span about 260 million base pairs, chromosome 1 makes up approximately 8% of the human genome. There are also a large number of diseases associated with chromosome 1, notably, the rare aging disease Hutchinson-Gilford progeria which is associated with the LMNA gene that encodes lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1.

REFERENCES

- Lamb, F.S., Barna, T.J., Goud, C., Marenholz, I., Mischke, D. and Schutte, B.C. 2000. Complex RNA processing of TDRKH, a novel gene encoding the putative RNA-binding tudor and KH domains. *Gene* 246: 209-218.
- Tayebi, N., Callahan, M., Madike, V., Stubblefield, B.K., Orvisky, E., Krasnewich, D., Fillano, J.J. and Sidransky, E. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. *Mol. Genet. Metab.* 73: 313-321.
- Plasilova, M., Russell, A.M., Wanner, A., Wolf, A., Dobbie, Z., Müller, H.J. and Heinemann, K. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. *Eur. J. Hum. Genet.* 12: 365-371.
- Côte, J. and Richard, S. 2005. Tudor domains bind symmetrical dimethylated arginines. *J. Biol. Chem.* 280: 28476-28483.
- Christensen, G.L., Ivanov, I.P., Wooding, S.P., Atkins, J.F., Mielnik, A., Schlegel, P.N. and Carrell, D.T. 2006. Identification of polymorphisms and balancing selection in the male infertility candidate gene, ornithine decarboxylase antizyme 3. *BMC Med. Genet.* 7: 27.
- Brimacombe, K.R. and Ladd, A.N. 2007. Cloning and embryonic expression patterns of the chicken CELF family. *Dev. Dyn.* 236: 2216-2224.
- Betarbet, R., Anderson, L.R., Gearing, M., Hodges, T.R., Fritz, J.J., Lah, J.J. and Levey, A.I. 2008. Fas-associated factor 1 and Parkinson's disease. *Neurobiol. Dis.* 31: 309-315.
- Yokoi, T., Koide, R., Matsuoka, K., Nakagawa, A. and Azuma, N. 2009. Analysis of the vitreous membrane in a case of type 1 Stickler syndrome. *Graefes Arch. Clin. Exp. Ophthalmol.* 247: 715-718.
- Chen, C., Jin, J., James, D.A., Adams-Cioaba, M.A., Park, J.G., Guo, Y., Tenaglia, E., Xu, C., Gish, G., Min, J. and Pawson, T. 2009. Mouse Piwi interactome identifies binding mechanism of Tdrkh Tudor domain to arginine methylated Miwi. *Proc. Natl. Acad. Sci. USA* 106: 20336-20341.

RESEARCH USE

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

CHROMOSOMAL LOCATION

Genetic locus: TDRKH (human) mapping to 1q21.3; Tdrkh (mouse) mapping to 3 F2.1.

SOURCE

TDRKH (N-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of TDRKH 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-139559 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TDRKH (N-16) is recommended for detection of TDRKH of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TDRKH (N-16) is also recommended for detection of TDRKH in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TDRKH siRNA (h): sc-78685, TDRKH siRNA (m): sc-154170, TDRKH shRNA Plasmid (h): sc-78685-SH, TDRKH shRNA Plasmid (m): sc-154170-SH, TDRKH shRNA (h) Lentiviral Particles: sc-78685-V and TDRKH shRNA (m) Lentiviral Particles: sc-154170-V.

Molecular Weight of TDRKH isoforms: 62/57 kDa.

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) 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.

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.