

TDRD1 Rabbit pAb

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Catalog # AP57976

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9BXT4
Reactivity	Mouse
Predicted	Rat, Pig, Dog, Human, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	132024
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human TDRD1
Epitope Specificity	201-300/1180
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Note=Component of the meiotic nuage, also named P granule, a germ-cell-specific organelle required to repress transposon during meiosis. Also present in chromatoid body.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Essential for the homologous recombination (HR) pathway of DNA repair. Involved in the homologous recombination repair (HRR) pathway of double-stranded DNA breaks arising during DNA replication or induced by DNA-damaging agents. The RAD51B-RAD51C dimer exhibits single-stranded DNA-dependent ATPase activity. The BCDX2 complex binds single-stranded DNA, single-stranded gaps in duplex DNA and specifically to nicks in duplex DNA. Participates in branch migration and Holliday junction resolution and thus is important for processing HR intermediates late in the DNA repair process. Also has an early function in DNA repair in facilitating phosphorylation of the checkpoint kinase CHK2 and thereby transduction of the damage signal, leading to cell cycle arrest and HR activation. Protects RAD51 from ubiquitin-mediated degradation that is enhanced following DNA damage. Plays a role in regulating mitochondrial DNA copy number under conditions of oxidative stress in the presence of RAD51 and XRCC3. Contributes to DNA cross-link resistance, sister chromatid cohesion and genomic stability. Involved in maintaining centrosome number in mitosis.

Additional Information

Gene ID	56165
Other Names	Tudor domain-containing protein 1, Cancer/testis antigen 41.1, CT41.1, TDRD1

Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	TDRD1
Function	Plays a central role during spermatogenesis by participating in the repression transposable elements and preventing their mobilization, which is essential for the germline integrity. Acts via the piRNA metabolic process, which mediates the repression of transposable elements during meiosis by forming complexes composed of piRNAs and Piwi proteins and governs the methylation and subsequent repression of transposons. Required for the localization of Piwi proteins to the meiotic nuage. Involved in the piRNA metabolic process by ensuring the entry of correct transcripts into the normal piRNA pool and limiting the entry of cellular transcripts into the piRNA pathway. May act by allowing the recruitment of piRNA biogenesis or loading factors that ensure the correct entry of transcripts and piRNAs into Piwi proteins (By similarity).
Cellular Location	Cytoplasm. Note=Component of the meiotic nuage, also named P granule, a germ-cell-specific organelle required to repress transposon activity during meiosis. Also present in chromatoid body (By similarity).
Tissue Location	Testis and ovary specific. Also expressed in several cancers.

Background

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.