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DDX4 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17285a

Product Information

Application	WB, E
Primary Accession	Q9NQI0
Other Accession	Q4R5S7, NP_001160005.1, NP_001136021.1
Reactivity	Human, Mouse
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36403
Calculated MW	79308
Antigen Region	103-131

Additional Information

Gene ID	54514
Other Names	Probable ATP-dependent RNA helicase DDX4, DEAD box protein 4, Vasa homolog, DDX4, VASA
Target/Specificity	This DDX4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 103-131 amino acids from the N-terminal region of human DDX4.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DDX4 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DDX4
Synonyms	VASA

Function	ATP-dependent RNA helicase required during spermatogenesis (PubMed:10920202, PubMed:21034600). Required to repress transposable elements and preventing their mobilization, which is essential for the germline integrity (By similarity). 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 (By similarity). Involved in the secondary piRNAs metabolic process, the production of piRNAs in fetal male germ cells through a ping-pong amplification cycle (By similarity). Required for PIWIL2 slicing- triggered piRNA biogenesis: helicase activity enables utilization of one of the slice cleavage fragments generated by PIWIL2 and processing these pre-piRNAs into piRNAs (By similarity).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:Q61496}. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:Q61496} Note=Component of the meiotic nuage, also named P granule, a germ-cell- specific organelle required to repress transposon activity during meiosis. {ECO:0000250|UniProtKB:Q61496}
Tissue Location	Expressed only in ovary and testis. Expressed in migratory primordial germ cells in the region of the gonadal ridge in both sexes.

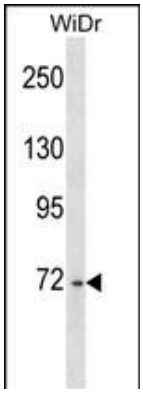
Background

DEAD box proteins, characterized by the conserved motif Asp-Glu-Ala-Asp (DEAD), are putative RNA helicases. They are implicated in a number of cellular processes involving alteration of RNA secondary structure such as translation initiation, nuclear and mitochondrial splicing, and ribosome and spliceosome assembly. Based on their distribution patterns, some members of this family are believed to be involved in embryogenesis, spermatogenesis, and cellular growth and division. This gene encodes a DEAD box protein, which is a homolog of VASA proteins in Drosophila and several other species. The gene is specifically expressed in the germ cell lineage in both sexes and functions in germ cell development. Multiple transcript variants encoding different isoforms have been found for this gene.

References

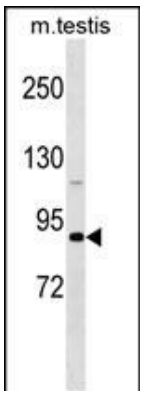
Tilgner, K., et al. Stem Cells 28(1):84-92(2010)
Sugimoto, K., et al. J. Hum. Genet. 54(8):450-456(2009)
Hashimoto, H., et al. Gynecol. Oncol. 111(2):312-319(2008)
Albamonte, M.S., et al. Hum. Reprod. 23(8):1895-1901(2008)
Guo, X., et al. Asian J. Androl. 9(3):339-344(2007)

Images



DDX4 Antibody (N-term) (Cat. #AP17285a) western blot analysis in WiDr cell line lysates (35ug/lane).This demonstrates the DDX4 antibody detected the DDX4 protein (arrow).

DDX4 Antibody (N-term) (Cat. #AP17285a) western blot



analysis in mouse testis tissue lysates (35ug/lane).This demonstrates the DDX4 antibody detected the DDX4 protein (arrow).