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# DDX4 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1403b

## Product Information

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| **Application** | IHC-P, WB, E |
| **Primary Accession** | Q9NQI0 |
| **Other Accession** | Q64060, Q6GWX0, Q61496, Q4R5S7, Q5W5U4 |
| **Reactivity** | Human |
| **Predicted** | Bovine, Monkey, Mouse, Pig, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB13974 |
| **Calculated MW** | 79308 |
| **Antigen Region** | 554-583 |

## Additional Information

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| **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 554-583 amino acids from the C-terminal region of human DDX4. |
| **Dilution** | IHC-P~~1:100~500 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 prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS. |
| **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 (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | DDX4 |
| **Synonyms** | VASA |

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| **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. |

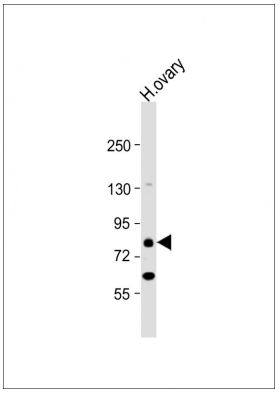
## Background

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.

## References

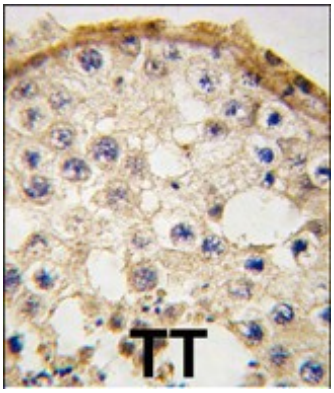
Guo,X., Asian J. Androl. 9 (3), 339-344 (2007)
Zeeman,A.M., Lab. Invest. 82 (2), 159-166 (2002)
Castrillon,D.H., Proc. Natl. Acad. Sci. U.S.A. 97 (17), 9585-9590 (2000)

## Images




Anti-DDX4 Antibody (C-term) at 1:1000 dilution + human ovary lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 79 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Formalin-fixed and paraffin-embedded human testis tissue reacted with DDX4 antibody (C-term) (Cat.#AP1403b), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been




evaluated.

## Citations

- Single-cell analysis of human ovarian cortex identifies distinct cell populations but no oogonial stem cells