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Anti-DDX4/MVH Antibody

Catalog # ABO11270

Product Information

Application	WB, IHC-P, IHC-F, ICC
Primary Accession	Q9NQI0
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Probable ATP-dependent RNA helicase DDX4(DDX4) detection. Tested with WB, IHC-P, IHC-F, ICC in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	54514
Other Names	Probable ATP-dependent RNA helicase DDX4, 3.6.4.13, DEAD box protein 4, Vasa homolog, DDX4, VASA
Calculated MW	79308
Application Details	Immunocytochemistry , 0.5-1 □g/ml, Human, Mouse, Rat Immunohistochemistry(Frozen Section), 0.5-1 □g/ml, Rat, Mouse Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, Mouse, By Heat Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm . Cytoplasm, perinuclear region .
Tissue Specificity	Expressed only in ovary and testis. Expressed in migratory primordial germ cells in the region of the gonadal ridge in both sexes. .
Source	Eukaryota
Protein Name	Probable ATP-dependent RNA helicase DDX4
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human DDX4(253-272aa EDEDSIFAHYQTGINFDKYD), identical to the the related rat and mouse sequences.

Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the DEAD box helicase family. DDX4/VASA subfamily.

Protein Information

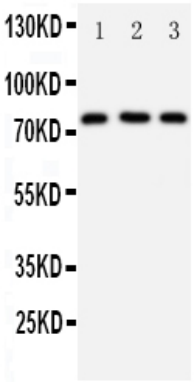
Name	DDX4
Synonyms	VASA
Function	ATP-dependent RNA helicase required during spermatogenesis (PubMed:10920202, PubMed:21034600). Required to repress transposable elements and preventing their mobilization, which is essential for the germline integrity (By similarity). Acts via the piRNA metabolic process, 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.

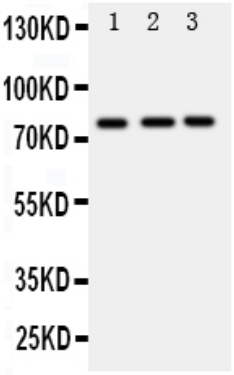
Background

DDX4(DEAD/H BOX 4), also known as VASA. The deduced 724-amino acid VASA protein contains the 8 conserved domains found in all known DEAD box proteins. The amino acid sequence in this core region shows greater similarity to VASA homologs in other species than to other human DEAD box proteins. By radiation hybrid analysis, Castrillon et al.(2000) mapped the VASA gene to 5q. By fluorescence in situ hybridization, they refined the localization to 5q11.2-q12. This region is syntenic to the distal end of mouse chromosome 13, where the mouse VASA homolog(Ddx4) resides(Abe and Noce, 1997). Using a combination of proteomics, cytology, and functional analysis in C. elegans, Chu et al.(2006) reduced 1,099 proteins copurified with spermatogenic chromatin to 132 proteins for functional analysis.

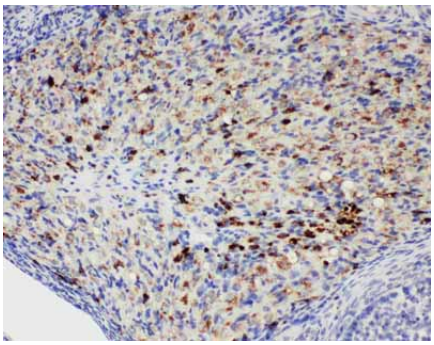
Images

Anti-DDX4/MVH antibody, ABO11270, Western blottingLane 1: Rat Testis Tissue LysateLane 2: Mouse Testis Tissue LysateLane 3: HELA Cell Lysate

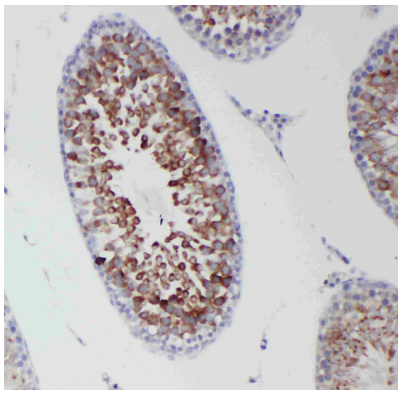




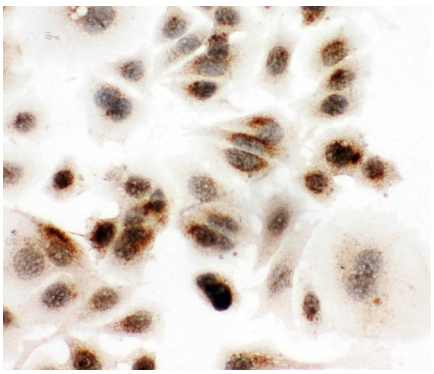
Anti-DDX4/MVH antibody, ABO11270, Western blottingLane 1: Rat Testis Tissue LysateLane 2: Mouse Testis Tissue LysateLane 3: Mouse Ovary Tissue Lysate



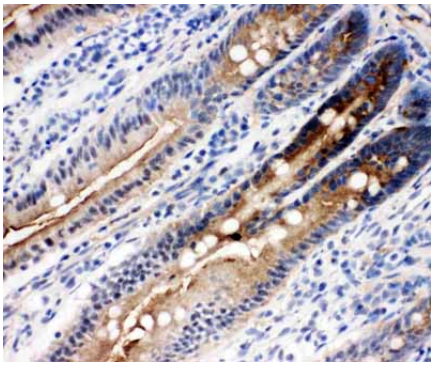
Anti-DDX4/MVH antibody, ABO11270, IHC(P)IHC(P): Rat Ovary Tissue



Anti-DDX4/MVH antibody, ABO11270, IHC(P)IHC(P): Rat Testis Tissue



Anti-DDX4/MVH antibody, ABO11270, ICCICC: MCF-7 Cell



Anti-DDX4/MVH antibody, ABO11270, IHC(F)IHC(F): Rat Intestine Tissue