10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-DDX4/MVH Antibody
Catalog # ABO11270

Specification

Anti-DDX4/MVH Antibody - 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.

Anti-DDX4/MVH Antibody - 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 MW KDa

Application Details
Immunocytochemistry , 0.5-1 µg/ml, Human, Mouse, Rat
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml, Rat, Mouse
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat
Western blot, 0.1-0.5 µg/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. .

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.

Anti-DDX4/MVH Antibody - 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.

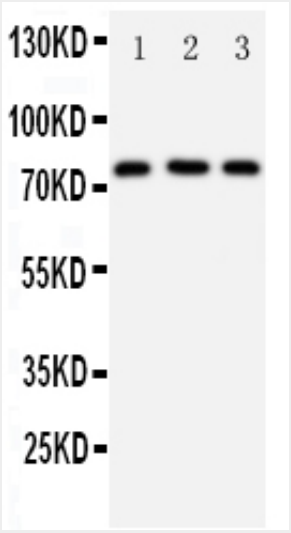
Anti-DDX4/MVH Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry

- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-DDX4/MVH Antibody - 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

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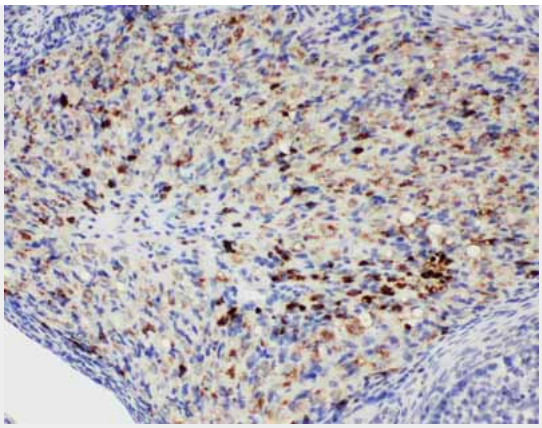
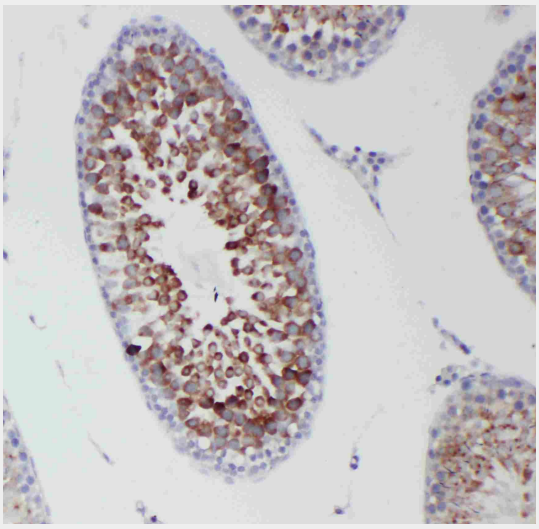
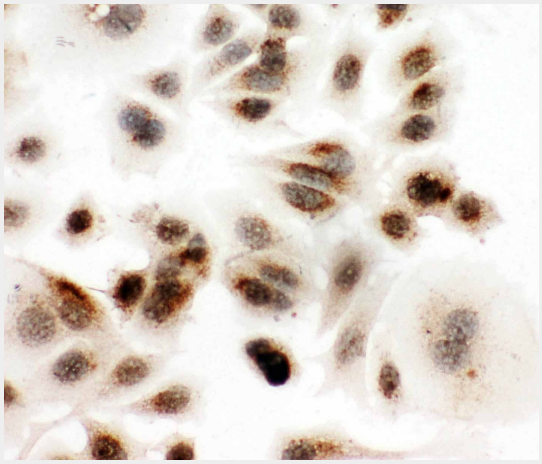


Anti-DDX4/MVH antibody, ABO11270, IHC(P)IHC(P): Rat Ovary Tissue



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



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

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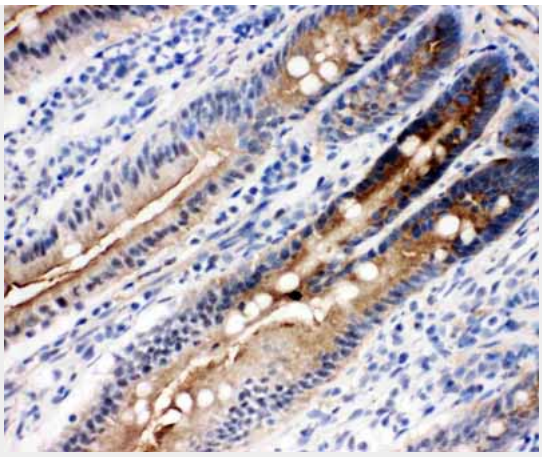

Anti-DDX4/MVH antibody, ABO11270, IHC(F)IHC(F): Rat Intestine Tissue

Anti-DDX4/MVH Antibody - 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.