10320 Camino Santa Fe, Suite G
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DDX4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1333a

Specification

DDX4 Antibody - Product Information

Application	**WB, IHC, IF, FC**
Primary Accession	Q9NQI0
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**76kDa KDa**

Description
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.

Immunogen
Purified recombinant fragment of human DDX4 expressed in E. Coli.

Formulation
Ascitic fluid containing 0.03% sodium azide.

DDX4 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

Dilution
WB~~1/500 - 1/2000
IHC~~1/200 - 1/1000
IF~~1/200 - 1/1000
FC~~1/200 - 1/400

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
DDX4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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DDX4 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.

DDX4 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

DDX4 Antibody - Images

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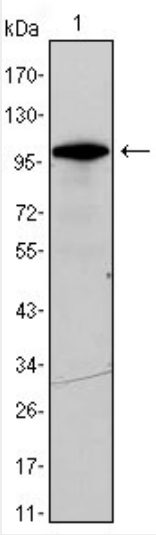

Figure 1: Western blot analysis using DDX4 mouse mAb against DDX4-hIgGFc transfected HEK293 cell lysate.

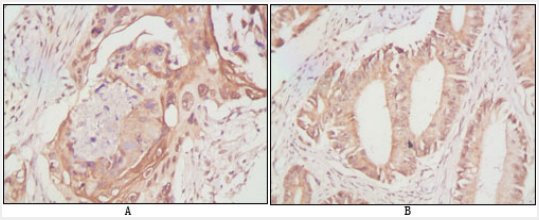

Figure 2: Immunohistochemical analysis of paraffin-embedded human lung cancer (A) and rectal cancer (B), showing cytoplasmic localization using DDX4 mouse mAb with DAB staining.

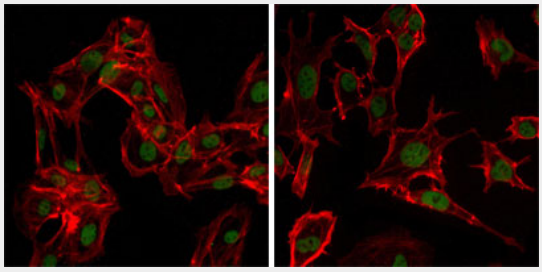

Figure 3: Immunofluorescence analysis of MSCs(left) and NTERA-2 (right) cells using DDX4 mouse mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin.

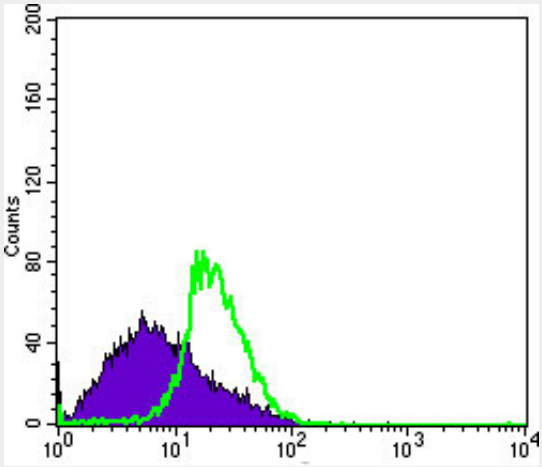

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Figure 4: Flow cytometric analysis of MSCS cells using DDX4 mouse mAb (green) and negative control (purple).

DDX4 Antibody - References

1. Proc Natl Acad Sci USA.2000 97(17):9585-90 2. Lab Invest.2002 82(2):159-66 3. Mol Reprod Dev.2004 67(1):1-7 4. Nat Genet.2004 36(1):40-5