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DDX41 Rabbit pAb

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Catalog # AP55524

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q9UJV9
Reactivity	Rat
Predicted	Human, Mouse, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	69838
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DDX41
Epitope Specificity	51-150/622
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus
SIMILARITY	Belongs to the DEAD box helicase family. DDX41 subfamily. Contains 1 CCHC-type zinc finger. Contains 1 helicase ATP-binding domain. Contains 1 helicase C-terminal domain.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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 the DEAD box protein family are believed to be involved in embryogenesis, spermatogenesis, and cellular growth and division. This gene encodes a member of this family. The function of this member has not been determined. Based on studies in Drosophila, the abstrakt gene is widely required during post-transcriptional gene expression. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	51428
Other Names	Probable ATP-dependent RNA helicase DDX41, 3.6.4.13, DEAD box protein 41, DEAD box protein abstrakt homolog, DDX41, ABS
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	DDX41
Synonyms	ABS
Function	Multifunctional protein that participates in many aspects of cellular RNA metabolism. Plays pivotal roles in innate immune sensing and hematopoietic homeostasis (PubMed:34473945). Recognizes foreign or self-nucleic acids generated during microbial infection, thereby initiating anti-pathogen responses (PubMed:23222971). Mechanistically, phosphorylation by BTK allows binding to dsDNA leading to interaction with STING1 (PubMed:25704810). Modulates the homeostasis of dsDNA through its ATP-dependent DNA-unwinding activity and ATP-independent strand-annealing activity (PubMed:35613581). In turn, induces STING1-mediated type I interferon and cytokine responses to DNA and DNA viruses (PubMed:35613581). Selectively modulates the transcription of certain immunity-associated genes by regulating their alternative splicing (PubMed:33650667). Binds to RNA (R)-loops, structures consisting of DNA/RNA hybrids and a displaced strand of DNA that occur during transcription, and prevents their accumulation, thereby maintaining genome stability (PubMed:36229594). Also participates in pre-mRNA splicing, translational regulation and snoRNA processing, which is essential for ribosome biogenesis (PubMed:36229594, PubMed:36780110).
Cellular Location	Nucleus. Cytoplasm Note=Predominantly present in the nucleus and traffics to the cytoplasm, specifically in the perinuclear region, after DNA stimulation.

Background

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