

# Anti-DDX17 Rabbit Monoclonal Antibody

Catalog # ABO15739

#### Specification

# Anti-DDX17 Rabbit Monoclonal Antibody - Product Information

Application Primary Accession Host Isotype Reactivity Clonality Format Description WB, IHC, IF, ICC, FC <u>092841</u> Rabbit IgG Human, Mouse Monoclonal Liquid

Anti-DDX17 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse.

## Anti-DDX17 Rabbit Monoclonal Antibody - Additional Information

Gene ID 10521

**Other Names** Probable ATP-dependent RNA helicase DDX17, 3.6.4.13, DEAD box protein 17, DEAD box protein p72, DEAD box protein p82, RNA-dependent helicase p72, DDX17

Calculated MW 70,80 kDa KDa

Application Details WB 1:500-1:2000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>FC 1:100

**Contents** Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen A synthesized peptide derived from human DDX17

Purification Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

#### Anti-DDX17 Rabbit Monoclonal Antibody - Protein Information

Name DDX17

#### Function

As an RNA helicase, unwinds RNA and alters RNA structures through ATP binding and hydrolysis. Involved in multiple cellular processes, including pre-mRNA splicing, alternative splicing, ribosomal RNA processing and miRNA processing, as well as transcription regulation. Regulates the alternative splicing of exons exhibiting specific features (PubMed: <a href="http://www.uniprot.org/citations/12138182" target=" blank">12138182</a>, PubMed:<a href="http://www.uniprot.org/citations/22266867" target="\_blank">22266867</a>, PubMed:<a href="http://www.uniprot.org/citations/23022728" target=" blank">23022728</a>, PubMed:<a href="http://www.uniprot.org/citations/24910439" target="\_blank">24910439</a>). For instance, promotes the inclusion of AC-rich alternative exons in CD44 transcripts (PubMed:<a href="http://www.uniprot.org/citations/12138182" target=" blank">12138182</a>). This function requires the RNA helicase activity (PubMed:<a href="http://www.uniprot.org/citations/12138182" target=" blank">12138182</a>, PubMed:<a href="http://www.uniprot.org/citations/22266867" target=" blank">22266867</a>, PubMed:<a href="http://www.uniprot.org/citations/23022728" target=" blank">23022728</a>, PubMed:<a href="http://www.uniprot.org/citations/24910439" target=" blank">24910439</a>). Affects NFAT5 and histone macro- H2A.1/MACROH2A1 alternative splicing in a CDK9-dependent manner (PubMed: <a href="http://www.uniprot.org/citations/22266867" target="\_blank">22266867</a>, PubMed:<a href="http://www.uniprot.org/citations/26209609" target=" blank">26209609</a>). In NFAT5, promotes the introduction of alternative exon 4, which contains 2 stop codons and may target NFAT5 exon 4-containing transcripts to nonsense-mediated mRNA decay, leading to the down-regulation of NFAT5 protein (PubMed:<a href="http://www.uniprot.org/citations/22266867" target=" blank">22266867</a>). Affects splicing of mediators of steroid hormone signaling pathway, including kinases that phosphorylates ESR1, such as CDK2, MAPK1 and GSK3B, and transcriptional regulators, such as CREBBP, MED1, NCOR1 and NCOR2. By affecting GSK3B splicing, participates in ESR1 and AR stabilization (PubMed:<a href="http://www.uniprot.org/citations/24275493" target=" blank">24275493</a>). In myoblasts and epithelial cells, cooperates with HNRNPH1 to control the splicing of specific subsets of exons (PubMed:<a href="http://www.uniprot.org/citations/24910439" target=" blank">24910439</a>). In addition to binding mature mRNAs, also interacts with certain pri-microRNAs, including MIR663/miR-663a, MIR99B/miR-99b, and MIR6087/miR-6087 (PubMed: <a href="http://www.uniprot.org/citations/25126784" target=" blank">25126784</a>). Binds primicroRNAs on the 3' segment flanking the stem loop via the 5'- [ACG]CAUC[ACU]-3' consensus sequence (PubMed: <a href="http://www.uniprot.org/citations/24581491" target=" blank">24581491</a>). Required for the production of subsets of microRNAs, including MIR21 and MIR125B1 (PubMed:<a href="http://www.uniprot.org/citations/24581491" target=" blank">24581491</a>, PubMed:<a href="http://www.uniprot.org/citations/27478153" target=" blank">27478153</a>). May be involved not only in microRNA primary transcript processing, but also stabilization (By similarity). Participates in MYC down-regulation at high cell density through the production of MYC-targeting microRNAs (PubMed:<a href="http://www.uniprot.org/citations/24581491" target=" blank">24581491</a>). Along with DDX5, may be involved in the processing of the 32S intermediate into the mature 28S ribosomal RNA (PubMed: <a href="http://www.uniprot.org/citations/17485482" target="\_blank">17485482</a>). Promoter-specific transcription regulator, functioning as a coactivator or corepressor depending on the context of the promoter and the transcriptional complex in which it exists (PubMed:<a href="http://www.uniprot.org/citations/15298701" target=" blank">15298701</a>). Enhances NFAT5 transcriptional activity (PubMed:<a href="http://www.uniprot.org/citations/22266867" target=" blank">22266867</a>). Synergizes with TP53 in the activation of the MDM2 promoter; this activity requires acetylation on lysine residues (PubMed:<a href="http://www.uniprot.org/citations/17226766" target=" blank">17226766</a>, PubMed:<a href="http://www.uniprot.org/citations/19995069" target="\_blank">19995069</a>, PubMed:<a href="http://www.uniprot.org/citations/20663877" target="blank">20663877</a>). May also coactivate MDM2 transcription through a TP53-independent pathway (PubMed:<a href="http://www.uniprot.org/citations/17226766" target=" blank">17226766</a>). Coactivates MMP7 transcription (PubMed:<a href="http://www.uniprot.org/citations/17226766" target=" blank">17226766</a>). Along with CTNNB1, coactivates MYC, JUN, FOSL1 and cyclin D1/CCND1 transcription (PubMed:<a



href="http://www.uniprot.org/citations/17699760" target=" blank">17699760</a>). Alone or in combination with DDX5 and/or SRA1 non-coding RNA, plays a critical role in promoting the assembly of proteins required for the formation of the transcription initiation complex and chromatin remodeling leading to coactivation of MYOD1-dependent transcription. This helicase-independent activity is required for skeletal muscle cells to properly differentiate into myotubes (PubMed: <a href="http://www.uniprot.org/citations/17011493" target=" blank">17011493</a>, PubMed:<a href="http://www.uniprot.org/citations/24910439" target=" blank">24910439</a>). During epithelial-to-mesenchymal transition, coregulates SMAD-dependent transcriptional activity, directly controlling key effectors of differentiation, including miRNAs which in turn directly repress its expression (PubMed:<a href="http://www.uniprot.org/citations/24910439" target=" blank">24910439</a>). Plays a role in estrogen and testosterone signaling pathway at several levels. Mediates the use of alternative promoters in estrogen-responsive genes and regulates transcription and splicing of a large number of steroid hormone target genes (PubMed:<a href="http://www.uniprot.org/citations/19995069" target=" blank">19995069</a>, PubMed:<a href="http://www.uniprot.org/citations/20406972" target=" blank">20406972</a>, PubMed:<a href="http://www.uniprot.org/citations/20663877" target=" blank">20663877</a>, PubMed:<a href="http://www.uniprot.org/citations/24275493" target=" blank">24275493</a>). Contrary to splicing regulation activity, transcriptional coregulation of the estrogen receptor ESR1 is helicase-independent (PubMed:<a href="http://www.uniprot.org/citations/19718048" target=" blank">19718048</a>, PubMed:<a href="http://www.uniprot.org/citations/24275493" target=" blank">24275493</a>). Plays a role in innate immunity. Specifically restricts bunyavirus infection, including Rift Valley fever virus (RVFV) or La Crosse virus (LACV), but not vesicular stomatitis virus (VSV), in an interferon- and DROSHA- independent manner (PubMed: <a href="http://www.uniprot.org/citations/25126784" target=" blank">25126784</a>). Binds to RVFV RNA, likely via structured viral RNA elements (PubMed:<a href="http://www.uniprot.org/citations/25126784" target=" blank">25126784</a>). Promotes mRNA degradation mediated by the antiviral zinc-finger protein ZC3HAV1, in an ATPase-dependent manner (PubMed:<a href="http://www.uniprot.org/citations/18334637" target=" blank">18334637</a>).

### **Cellular Location**

Nucleus. Nucleus, nucleolus. Cytoplasm, cytosol. Note=In the course of bunyavirus infection, relocalizes from the nucleus to the cytosol where it binds viral RNA to antagonize replication.

#### **Tissue Location**

Widely expressed (PubMed:8871553). Low expression, if any, in normal colonic epithelial cells (at protein level). Levels tend to increase during colon cancer progression, from very low in benign hyperplastic polyps to very high in tubular and villous adenomas (PubMed:17699760).

#### Anti-DDX17 Rabbit Monoclonal Antibody - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

#### Anti-DDX17 Rabbit Monoclonal Antibody - Images





Western blot analysis of DDX17 expression in 293T cell lysate.



All lanes use the Antibody at 1:8K dilution for 1 hour at room temperature.



All lanes use the Antibody at 1:8K dilution for 1 hour at room temperature.