

DEAD-box ATP-dependent RNA helicase 2 (Os01g0639100, LOC_Os01g45190), Recombinant Protein

Cat *RP14151*

Size 0.02 mg (E-Coli)/ 0.02 mg (Yeast)/ 0.1 mg (E-Coli)/ 0.1 mg (Yeast)/ 0.02 mg (Baculovirus)/ 0.02 mg (Mammalian-Cell)/ 0.1

mg (Baculovirus)/ 1 mg (E-Coli)/ 1 mg (Yeast)/ 0.1 mg (Mammalian-Cell)/ 1 mg (Baculovirus)/ 0.5 mg (Mammalian-Cell)
Species *Oryza sativa* subsp. japonica (Rice)

Full Product Name

Recombinant *Oryza sativa* subsp. japonica DEAD-box ATP-dependent RNA helicase 2 (Os01g0639100, LOC_Os01g45190)

Product Gene Name

Os01g0639100 recombinant protein

Product Synonym Gene Name

Os01g0639100; LOC_Os01g45190

Purity

Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)

Sequence

MAAATTSRRG PGAMDDENLT FETSPGVEVI SSFDQMGI RD DLLRGIYAYG FEKPSAIQQR AVLPIISGRD
VIAQAQSGTG KTSMSLSVC QIVDTAVREV QALILSPTRE LAAQTERV ML AIGDFINI QV HACIGGKSIG
EDIRKLEHGV HVSSTGTPGRV CDMIKRRTL R TRAIKLLILD EADEMLGRGF KDQIYDVYRY LPPELQVCLI
SATLPHEILE MTSKFMTDPV RILVKRDELT LEGIKQFFVA VEKEEWKFDT LCDLYDTLTI TQAVIFCNTK
RKVDWLTERM RSNFTVSAM HGDMPQKERD AIMGEFRSGA TRVLITTDVW ARGLDVQQVS LVINYDLPNN
RELYIHRIGR SGRFGRKGVA INFVKKEDIR ILRDIEQYYS TQIDEMPMNV ADLI

Sequence Positions

1-404, Full length protein

Format

Lyophilized or liquid (Format to be determined during the manufacturing process)

Host

E Coli or Yeast or Baculovirus or Mammalian Cell

Molecular Weight

45,599 Da

Storage

Store at -20°C. For long-term storage, store at -20°C or -80°C. Store working aliquots at 4°C for up to one week. Repeated freezing and thawing is not recommended.

Protein Family

DEAD-box ATP-dependent RNA helicase

NCBI Accession

XP_015621327.1

NCBI GI

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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mg (Baculovirus)/ 1 mg (E-Coli)/ 1 mg (Yeast)/ 0.1 mg

(Mammalian-Cell)/ 1 mg (Baculovirus)/ 0.5 mg (Mammalian-Cell)

1002234236
NCBI GenBank Nucleotide #
XM_015765841.1

NCBI GeneID

4326580

NCBI Official Full Name

DEAD-box ATP-dependent RNA helicase 2

NCBI Official Symbol

LOC4326580

NCBI Protein Information

DEAD-box ATP-dependent RNA helicase 2

UniProt Gene Name

EIF4A3A

UniProt Synonym Gene Names

OsRH2

UniProt Protein Name

Eukaryotic initiation factor 4A-III homolog A

UniProt Synonym Protein Names

DEAD-box ATP-dependent RNA helicase 2

UniProt Primary Accession

Q5VNM3

UniProt Secondary Accession

B7EMG9

UniProt Related Accession

Q5VNM3

UniProt Comments

ATP-dependent RNA helicase. Core component of the splicing-dependent multiprotein exon junction complex (EJC) deposited at splice junctions on mRNAs. The EJC is a dynamic structure consisting of core proteins and several peripheral nuclear and cytoplasmic associated factors that join the complex only transiently either during EJC assembly or during subsequent mRNA metabolism. The EJC marks the position of the exon-exon junction in the mature mRNA for the gene expression machinery and the core components remain bound to spliced mRNAs throughout all stages of mRNA metabolism thereby influencing downstream processes including nuclear mRNA export, subcellular mRNA localization, translation efficiency and nonsense-mediated mRNA decay (NMD). Its RNA-dependent ATPase and RNA-helicase activities are induced by MLN51/CASC3, but abolished in presence

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mg (Baculovirus)/ 1 mg (E-Coli)/ 1 mg (Yeast)/ 0.1 mg

(Mammalian-Cell)/ 1 mg (Baculovirus)/ 0.5 mg (Mammalian-Cell)

of the MAGO-Y14 heterodimer, thereby trapping the ATP-bound EJC core onto spliced mRNA in a stable conformation. The inhibition of ATPase activity by the MAGO-Y14 heterodimer increases the RNA-binding affinity of the EJC core proteins play essential roles in rice development, growth and reproduction. Regulates the splicing of UDT1 (UNDEVELOPED TAPETUM 1) pre-mRNA transcript. UDT1 is a key regulator in stamen development (PubMed:27071313).

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