

DDX39B Protein, Human (GST)

Cat. No.:	HY-P71534
Synonyms:	0610030D10Rik; 4F2-LC6; 56kDa U2AF65-associated protein; AI428441; ATP-dependent RNA helicase p47; B(0,+)-type amino acid transporter 1; BAT1; Bat1a; D17H6S81E; D17H6S81E-1; D6S81E; D6S81Eh; DDX39B; DEAD (Asp-Glu-Ala-Asp) box polypeptide 39B; DEAD box protein UAP56; DX39B_HUMAN; EC 3.6.1.-; Glycoprotein-associated amino acid transporter b0,+AT1; HLA-B-associated transcript 1 protein; HLA-B-associated transcript 1A; HLA-B-associated transcript-1; MGC127051; MGC19235; MGC38799; nuclear RNA helicase (DEAD family); OTTHUMP00000029229; OTTHUMP00000165889; OTTHUMP00000165890; p47; Solute carrier family 7 member 9; Spliceosome RNA helicase BAT1; Spliceosome RNA helicase DDX39B; U2AF65-associated protein; 56-KD; UAP56
Species:	Human
Source:	E. coli
Accession:	Q13838 (2A-251V)
Gene ID:	7919
Molecular Weight:	Approximately 55.2 kDa

PROPERTIES

AA Sequence	<pre> A E N D V D N E L L D Y E D D E V E T A A G G D G A E A P A K K D V K G S Y V S I H S S G F R D F L L K P E L L R A I V D C G F E H P S E V Q H E C I P Q A I L G M D V L C Q A K S G M G K T A V F V L A T L Q Q L E P V T G Q V S V L V M C H T R E L A F Q I S K E Y E R F S K Y M P N V K V A V F F G G L S I K K D E E V L K K N C P H I V V G T P G R I L A L A R N K S L N L K H I K H F I L D E C D K M L E Q L D M R R D V Q E I F R M T P H E K Q V M M F S A T L S K E I R P V C R K F M Q D P M E I F V </pre>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

The DDX39B protein is intricately involved in the nuclear export of both spliced and unspliced mRNA. As a crucial component of the TREX complex, it plays a pivotal role in coupling mRNA transcription, processing, and nuclear export, specifically associating with spliced mRNA rather than unspliced pre-mRNA. TREX is recruited to spliced mRNAs through a transcription-independent mechanism, binding to mRNA upstream of the exon-junction complex (EJC) and participating in mRNA export to the cytoplasm through the TAP/NFX1 pathway. During the assembly of TREX, DDX39B may undergo multiple rounds of ATP hydrolysis, driving the subsequent loading of components such as ALYREF/THOC and CHTOP onto mRNA. Additionally, DDX39B is implicated in the nuclear export of intronless mRNA, where its ATP-bound form recruits the export adapter ALYREF/THOC4 to intronless mRNA, with ATP hydrolysis triggering dissociation from RNA, allowing the association of ALYREF/THOC4 and the NXF1-NXT1 heterodimer. Beyond its role in mRNA export, DDX39B is involved in transcription elongation and contributes to genome stability. Functioning as a splice factor, it is essential for the initial ATP-dependent step in spliceosome assembly and the interaction of U2 snRNP with the branchpoint. DDX39B exhibits RNA-stimulated ATP binding/hydrolysis activity and ATP-dependent RNA unwinding activity, with a preference for ssRNA over dsRNA. Notably, its ATPase and helicase activities remain largely unaffected by U2AF2, while the impact of ALYREF/THOC4 stimulation is reported with conflicting findings.

Caution: Product has not been fully validated for medical applications. For research use only.

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