SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-HEAB antibody

Catalog Number: SL15436R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	HEAB
Immunogen:	KLH conjugated synthetic peptide derived from human HEAB: 1-100/425
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 ELISA=1:5000-10000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	(predicted: Human, Mouse, Rat, Cow, Horse, Rabbit)
Predicted MW.:	48kDa
Subcellular Location:	The nucleus
Background:	HEAB is a 425 amino acid nuclear protein that belongs to the Clp1 family. Utilizing magnesium, manganese or nickel as cofactors, HEAB participates in the phosphorylation of the 5'-hydroxyl groups of double- and single- stranded RNA and DNA. HEAB is a member of the tRNA splicing endonuclease complex, in conjunction with TSEN2, TSEN15, TSEN34 and TSEN54, and is also a member of the pre-mRNA cleavage complex II. The gene encoding HEAB maps to human chromosome 11q12.1 and mouse chromosome 2 D; mutations to this gene may lead to a reduced pre-mRNA cleavage activity. HEAB exists as two isoforms due to alternative splicing events. **Function:** Polynucleotide kinase that can phosphorylate the 5'-hydroxyl groups of double-stranded RNA (dsRNA), single-stranded RNA (ssRNA), double stranded DNA (dsDNA) and double-stranded DNA:RNA hybrids. dsRNA is phosphorylated more efficiently than dsDNA, and the RNA component of a DNA:RNA hybrid is phosphorylated more efficiently than the

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	DNA component. Appears to have roles in both tRNA splicing and mRNA 3'-end formation. Component of the tRNA splicing endonuclease complex. Phosphorylates the 5'-terminus of the tRNA 3'-exon during tRNA splicing; this phosphorylation event is a prerequisite for the subsequent ligation of the two exon halves and the production of a mature tRNA. Component of the pre-mRNA cleavage complex II (CF-II), which seems to be required for mRNA 3'-end formation. Also phosphorylates the 5'-terminus of exogenously introduced short interfering RNAs (siRNAs), which is a necessary prerequisite for their incorporation into the RNA-induced silencing complex (RISC). However, endogenous siRNAs and microRNAs (miRNAs) that are produced by the cleavage of dsRNA precursors by DICER1 already contain a 5'-phosphate group, so this protein may be dispensible for normal RNA-mediated gene silencing. **Subunit:** Component of the tRNA splicing endonuclease complex, composed of CLP1, TSEN2, TSEN15, TSEN34 and TSEN54. Component of pre-mRNA cleavage complex II (CF-II). Also associates with numerous components of the pre-mRNA cleavage complex I (CF-I/CFIm), including NUDT21, CPSF2, CPSF3, CPSF6 and CPSF7. Interacts with CSTF2 and SYMPK. **Subcellular Location:** Nucleus. **Similarity:** Belongs to the Clp1 family. Clp1 subfamily. **Database links:** **Entrez Gene:** 10978 Human Omim: 608757 Human **SwissProt:** Q92989 Human **Unigene:** 523687 Human

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