

KD-Validated Anti-CLP1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody

Catalog # AGI1307

Product Information

Application	WB, FC, ICC
Primary Accession	Q92989
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB 3085
Calculated MW	47646
Gene Name	CLP1
Aliases	CLP1; Cleavage Factor Polyribonucleotide Kinase Subunit 1; HEAB; Cleavage And Polyadenylation Factor I Subunit 1; Polyribonucleotide 5'-Hydroxyl-Kinase Clp1; Pre-mRNA Cleavage Complex II Protein Clp1; Polyadenylation Factor Clp1; Polynucleotide Kinase Clp1; EC 2.7.1.78; HClp1; CLP1, Cleavage And Polyadenylation Factor I Subunit, Homolog (S. Cerevisiae); Polyribonucleotide 5'-Hydroxyl-Kinase; Homolog Of Yeast CFIA Subunit Clp1p; ATP/GTP-Binding Protein; ATP/GTPbinding Protein; HCLP1
Immunogen	A synthesized peptide derived from human HEAB

Additional Information

Gene ID	10978
Other Names	Polyribonucleotide 5'-hydroxyl-kinase Clp1 {ECO:0000255 HAMAP-Rule:MF_03035}, 2.7.1.78 {ECO:0000255 HAMAP-Rule:MF_03035}, Polyadenylation factor Clp1 {ECO:0000255 HAMAP-Rule:MF_03035}, Polynucleotide kinase Clp1 {ECO:0000255 HAMAP-Rule:MF_03035}, Pre-mRNA cleavage complex II protein Clp1 {ECO:0000255 HAMAP-Rule:MF_03035}, CLP1 {ECO:0000255 HAMAP-Rule:MF_03035}, HEAB

Protein Information

Name	CLP1 {ECO:0000255 HAMAP-Rule:MF_03035}
Synonyms	HEAB
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 DNA component. Plays a key role 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 (PubMed:[24766809](#), PubMed:[24766810](#)). Its role in tRNA splicing and maturation is required for cerebellar development (PubMed:[24766809](#), PubMed:[24766810](#)). 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 dispensable for normal RNA-mediated gene silencing.

Cellular Location

Nucleus {ECO:0000255 | HAMAP-Rule:MF_03035, ECO:0000269 | PubMed:11060040, ECO:0000269 | PubMed:24766810}

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