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CLP1 Recombinant Rabbit mAb

Catalog # AP100048

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q92989
Other Accession	Q92989
Reactivity	Human
Host	Rabbit
Clonality	Recombinant
Calculated MW	47646
Physical State	Liquid
Immunogen	A synthesized peptide derived from human CLP1
Epitope Specificity	46047
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
SIMILARITY	Belongs to the Clp1 family. Clp1 subfamily.
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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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.

Additional Information

Gene ID	10978
Other Names	HEAB; hClp1; CLP1_HUMAN; CLP1; Polyadenylation factor Clp1; Polynucleotide kinase Clp1; Pre-mRNA cleavage complex II protein Clp1; 2.7.1.78; cleavage factor polyribonucleotide kinase subunit 1; CLP1, cleavage and polyadenylation factor I subunit, homolog (S. cerevisiae); cleavage and polyadenylation factor I subunit 1; ATP/GTPbinding protein; polyribonucleotide 5'-hydroxyl-kinase
Dilution	IHC-P=1:50-200,IHC-F=1:50-200,IF=1:50-200
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When

reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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 dispensible for normal RNA-mediated gene silencing.
Cellular Location	Nucleus {ECO:0000255|HAMAP-Rule:MF_03035, ECO:0000269|PubMed:11060040, ECO:0000269|PubMed:24766810}

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.