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ERI1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50075

Product Information

Application	WB
Primary Accession	Q8IV48
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	polyclonal
Calculated MW	40064

Additional Information

Gene ID	90459
Other Names	3'-5' exoribonuclease 1, 31--, 3'-5' exonuclease ERI1, Eri-1 homolog, Histone mRNA 3'-end-specific exoribonuclease, Histone mRNA 3'-exonuclease 1, Protein 3'hExo, HEXO, ERI1, 3'EXO, THEX1
Dilution	WB~~ 1:1000
Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.
Storage Conditions	-20℃

Protein Information

Name	ERI1 (HGNC:23994)
Synonyms	3'EXO, THEX1
Function	RNA exonuclease that binds to the 3'-end of histone mRNAs and degrades them, suggesting that it plays an essential role in histone mRNA decay after replication (PubMed:14536070, PubMed:16912046, PubMed:17135487, PubMed:37352860). A 2' and 3'-hydroxyl groups at the last nucleotide of the histone 3'-end is required for efficient 3'-end histone mRNA exonuclease activity and degradation of RNA substrates (PubMed:14536070, PubMed:16912046, PubMed:17135487). Also able to degrade the 3'-overhangs of short interfering RNAs (siRNAs) in vitro, suggesting a possible role as regulator of RNA interference (RNAi) (PubMed:14961122). Required for binding the 5'-ACCCA-3' sequence present in stem-loop structure (PubMed:14536070, PubMed:16912046). Able to bind other mRNAs (PubMed:14536070, PubMed:16912046). Required for 5.8S rRNA 3'-end processing (PubMed:37352860). Also binds to 5.8s ribosomal RNA (By similarity). Binds with high affinity to the stem- loop structure of

replication-dependent histone pre-mRNAs (PubMed:14536070, PubMed:16912046, PubMed:17135487). In vitro, does not have sequence specificity (PubMed:17135487). In vitro, has weak DNA exonuclease activity (PubMed:17135487). In vitro, shows biphasic kinetics such that there is rapid hydrolysis of the last three unpaired RNA nucleotides in the 39 flanking sequence followed by a much slower cleavage through the stem that occurs over a longer incubation period in the order of hours (PubMed:17135487). ERI1-mediated RNA metabolism plays a key role in chondrogenesis (PubMed:37352860).

Cellular Location Cytoplasm. Nucleus. Nucleus, nucleolus

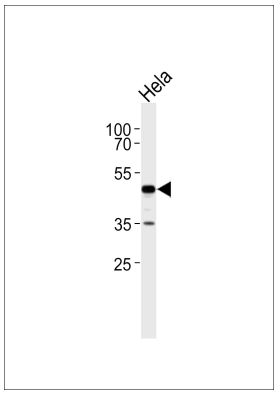
Background

RNA exonuclease that binds to the 3'-end of histone mRNAs and degrades them, suggesting that it plays an essential role in histone mRNA decay after replication. A 2' and 3'-hydroxyl groups at the last nucleotide of the histone 3'-end is required for efficient degradation of RNA substrates. Also able to degrade the 3'-overhangs of short interfering RNAs (siRNAs) in vitro, suggesting a possible role as regulator of RNA interference (RNAi). Requires for binding the 5'-ACCCA-3' sequence present in stem-loop structure. Able to bind other mRNAs. Required for 5.8S rRNA 3'-end processing. Also binds to 5.8s ribosomal RNA. Binds with high affinity to the stem-loop structure of replication- dependent histone pre-mRNAs.

References

Dominski Z.,et al.Mol. Cell 12:295-305(2003).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
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Yang X.-C.,et al.J. Biol. Chem. 281:30447-30454(2006).

Images



Western blot analysis of lysate from Hela cell line,using ERI1 Antibody(C21254). C21254 was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysate at 35ug.

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