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HEXO Rabbit pAb

Catalog # AP98198

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8IV48
Other Accession	Q8IV48
Reactivity	Mouse
Predicted	Rat, Pig, Human, Rabbit, Chicken, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	40064
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human HEXO
Epitope Specificity	51-150/349
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 exonuclease domain.Contains 1 SAP domain.
SUBUNIT	Identified in a histone pre-mRNA complex, at least composed of ERI1, LSM11, SLBP, SNRPB, SYNCRIP and YBX1. Interacts in a cooperative manner with SLBP to the mature 3'-end of histone mRNAs (By similarity). Binds to 40S and 60S ribosomal subunits and to 80S assembled ribosomes. Found in a ternary complex with SLBP and the stem-loop structure of the 3'-end of histone mRNAs.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Helicase with RNase motif, more commonly designated Dicer, cleaves double-stranded RNA (dsRNA) in the RNA interference and small temporal RNA (stRNA) pathways, producing active small RNA components (siRNAs) which target the destruction of RNA and repress gene expression. Human Dicer cleaves dsRNA independent of ATP. The 3’-5’ exonuclease ERI-1, also known as Protein 3'hExo, degrades Histone mRNA after replication and may be involved in the regulation of RNA interference. ERI-1 has a high affinity for the stem-loop structure of replication-dependent Histone pre-mRNAs. It requires the 5'-ACCCA-3' sequence present in stem-loop structure. ERI-1 and a stem-loop binding protein (SLBP) target opposite faces of a unique highly conserved stem-loop RNA scaffold towards the 3' end of Histone mRNA.

Additional Information

Gene ID	90459
Other Names	ERI1_HUMAN; ERI1; 3'-5' exonuclease ERI1; Eri-1 homolog; Histone mRNA 3'-end-specific exoribonuclease; Histone mRNA 3'-exonuclease 1; Protein 3'hExo (HEXO); 3.1.13.1; 3'EXO; THEX1; ERI1_RAT; exoribonuclease 1; three prime histone mRNA exonuclease 1; enhanced RNAi three prime mRNA

exonuclease homolog 1 (C.elegans)

Dilution IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500

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 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

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