10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

EXOSC10 Rabbit pAb

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Catalog # AP55067

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q01780
Reactivity	Human, Mouse
Predicted	Rat, Pig, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	100831
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human EXOSC10/PMSCL2
Epitope Specificity	41-140/885
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Nucleus > nucleolus. Nucleus. Strongly enriched in the nucleolus and a small amount has been found in cytoplasm supporting the existence of a nucleolar RNA exosome complex form.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The exosome is a multi-subunit complex composed of several highly conserved proteins, some of which are 3′ to 5′ exoribonucleases. The complex is involved in a variety of cellular processes and is responsible for degrading unstable mRNAs that contain AU-rich (ARE) elements in their untranslated 3′ region. EXOSC10, also known as PMSCL, PMSCL2, p2, p3, p4, RRP6, Rrp6p, PM-Scl, or PM/Scl-100, is an 885 amino acid protein that contains one HRDC domain and one 3′-5′ enonuclease domain. Localized to both the cytoplasm and the nucleus, EXOSC10 is part of the post-splicing exosome complex and is involved in mRNA surveillance, mRNA nuclear export and nonsense-mediated decay of mRNAs containing premature stop codons. Antibodies against EXOSC10 have been found in patients with scleroderma and/or polymyositis (chronic diseases of the skin and muscle, respectively), suggesting that EXOSC10 may be involved in the pathogenesis of these diseases. Two isoforms of EXOSC10 exist due to alternative splicing events.

Additional Information

Gene ID	5394
Other Names	Exosome complex component 10, 3.1.13.-, Autoantigen PM/Scl 2, P100 polymyositis-scleroderma overlap syndrome-associated autoantigen, Polymyositis/scleroderma autoantigen 100 kDa, PM/Scl-100, Polymyositis/scleroderma autoantigen 2, EXOSC10 (HGNC:9138)

Dilution	WB=1:500-2000,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.

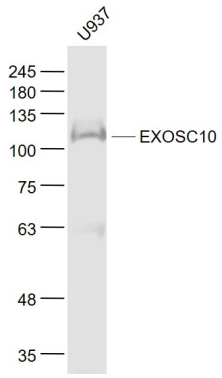
Protein Information

Name	EXOSC10 (HGNC:9138)
Function	Catalytic component of the RNA exosome complex which has 3'->5' exoribonuclease activity and participates in a multitude of cellular RNA processing and degradation events. In the nucleus, the RNA exosome complex is involved in proper maturation of stable RNA species such as rRNA, snRNA and snoRNA, in the elimination of RNA processing by-products and non-coding 'pervasive' transcripts, such as antisense RNA species and promoter-upstream transcripts (PROMPTs), and of mRNAs with processing defects, thereby limiting or excluding their export to the cytoplasm. Part of the small subunit (SSU) processome, first precursor of the small eukaryotic ribosomal subunit. During the assembly of the SSU processome in the nucleolus, many ribosome biogenesis factors, an RNA chaperone and ribosomal proteins associate with the nascent pre-rRNA and work in concert to generate RNA folding, modifications, rearrangements and cleavage as well as targeted degradation of pre-ribosomal RNA by the RNA exosome (PubMed:34516797). The RNA exosome may be involved in Ig class switch recombination (CSR) and/or Ig variable region somatic hypermutation (SHM) by targeting AICDA deamination activity to transcribed dsDNA substrates. In the cytoplasm, the RNA exosome complex is involved in general mRNA turnover and specifically degrades inherently unstable mRNAs containing AU-rich elements (AREs) within their 3' untranslated regions, and in RNA surveillance pathways, preventing translation of aberrant mRNAs. It seems to be involved in degradation of histone mRNA. EXOSC10 is required for nucleolar localization of C1D and probably mediates the association of MTREX, C1D and MPHOSPH6 with the RNA exosome involved in the maturation of 5.8S rRNA. Plays a role in the recruitment of replication protein A complex (RPA) and RAD51 to DNA double-strand breaks caused by irradiation, contributing to DNA repair by homologous recombination (PubMed:25632158, PubMed:31086179). Regulates levels of damage-induced RNAs in order to prevent DNA-RNA hybrid formation at DNA double-strand breaks and limit DNA end resection after damage (PubMed:31086179). Plays a role in oocyte development, maturation and survival (By similarity). Required for normal testis development and mitotic division of spermatogonia (By similarity). Plays a role in proper embryo development (By similarity). Required for global protein translation (PubMed:26857222, PubMed:36912080). Required for cell proliferation (PubMed:36912080). Regulates metabolism of C9orf72- derived repeat RNA that can be translated into toxic dipeptide repeat proteins (PubMed:32830871).
Cellular Location	Cytoplasm. Nucleus. Nucleus, nucleolus. Nucleus, nucleoplasm Note=Strongly enriched in the nucleolus and a small amount has been found in cytoplasm supporting the existence of a nucleolar RNA exosome complex form (PubMed:20531386, PubMed:34516797). Arginine-rich dipeptide repeat proteins expressed from C9orf72-derived repeat RNA cause diffuse nuclear misdistribution of EXOSC10 (PubMed:32830871) Relocates to the DNA double-strand breaks in response to irradiation (PubMed:31086179).

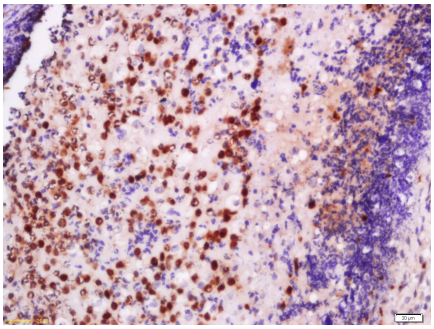
Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Images



Sample:
U937(Human) Cell Lysate at 30 ug
Primary: Anti- EXOSC10 (AP55067) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 101 kD
Observed band size: 103 kD



Tissue/cell: human skin tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-EXOSC10, Unconjugated(AP55067) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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