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

CPSF3 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14804c

Product Information

Application	WB, E
Primary Accession	Q9UKF6
Other Accession	Q9QXK7, P79101, NP_057291.1
Reactivity	Human
Predicted	Bovine, Mouse, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34115
Calculated MW	77486
Antigen Region	192-221

Additional Information

Gene ID	51692
Other Names	Cleavage and polyadenylation specificity factor subunit 3, 3127-, Cleavage and polyadenylation specificity factor 73 kDa subunit, CPSF 73 kDa subunit, mRNA 3'-end-processing endonuclease CPSF-73, CPSF3, CPSF73
Target/Specificity	This CPSF3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 192-221 amino acids from the Central region of human CPSF3.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CPSF3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CPSF3
Synonyms	CPSF73

Function

Component of the cleavage and polyadenylation specificity factor (CPSF) complex that plays a key role in pre-mRNA 3'-end formation, recognizing the AAUAAA signal sequence and interacting with poly(A) polymerase and other factors to bring about cleavage and poly(A) addition. Has endonuclease activity, and functions as an mRNA 3'-end-processing endonuclease (PubMed:30507380). Also involved in the histone 3'-end pre-mRNA processing (PubMed:30507380). U7 snRNP- dependent protein that induces both the 3'-endoribonucleolytic cleavage of histone pre-mRNAs and acts as a 5' to 3' exonuclease for degrading the subsequent downstream cleavage product (DCP) of mature histone mRNAs. Cleavage occurs after the 5'-ACCCA-3' sequence in the histone pre-mRNA leaving a 3'hydroxyl group on the upstream fragment containing the stem loop (SL) and 5' phosphate on the downstream cleavage product (DCP) starting with CU nucleotides. The U7-dependent 5' to 3' exonuclease activity is processive and degrades the DCP RNA substrate even after complete removal of the U7-binding site. Binds to the downstream cleavage product (DCP) of histone pre-mRNAs and the cleaved DCP RNA substrate in a U7 snRNP dependent manner. Required for entering/progressing through S-phase of the cell cycle (PubMed:30507380). Required for the selective processing of microRNAs (miRNAs) during embryonic stem cell differentiation via its interaction with ISY1 (By similarity). Required for the biogenesis of all miRNAs from the pri-miR-17-92 primary transcript except miR-92a (By similarity). Only required for the biogenesis of miR-290 and miR-96 from the pri-miR-290-295 and pri-miR-96-183 primary transcripts, respectively (By similarity).

Cellular Location

Nucleus.

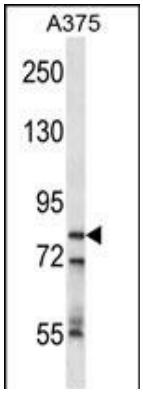
Background

Most eukaryotic mRNA precursors (pre-mRNAs) undergo extensive maturational processing, including cleavage and polyadenylation at the 3-prime end. CPSF3 encodes the 73-kD subunit of the cleavage and polyadenylation specificity factor (CPSF) and is the pre-mRNA 3-prime-end-processing endonuclease (Mandel et al., 2006 [PubMed 17128255]).

References

Rozenblatt-Rosen, O., et al. Proc. Natl. Acad. Sci. U.S.A. 106(3):755-760(2009)
Zhu, Z.H., et al. Oncogene 28(1):41-51(2009)
Yang, X.C., et al. Mol. Cell. Biol. 29(1):31-42(2009)
Kolev, N.G., et al. EMBO Rep. 9(10):1013-1018(2008)
de la Vega, L., et al. J. Mol. Biol. 372(2):317-330(2007)

Images



CPSF3 Antibody (Center) (Cat. #AP14804c) western blot analysis in A375 cell line lysates (35ug/lane).This demonstrates the CPSF3 antibody detected the CPSF3 protein (arrow).

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