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NUDT21 Rabbit pAb

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Catalog # AP59083

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	O43809
Predicted	Human, Mouse, Rat, Dog, Pig, Horse, Rabbit, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	26227
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human NUDT21
Epitope Specificity	101-200/227
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	Nucleus. In punctate subnuclear structures localized adjacent to nuclear speckles, called paraspeckles.
SIMILARITY	Belongs to the Nudix hydrolase family. CPSF5 subfamily. Contains 1 nudix hydrolase domain.
Post-translational modifications	Acetylated mainly by p300/CBP, recruited to the complex by CPSF6. Acetylation decreases interaction with PAPAO. Deacetylated by the class I/II HDACs, HDAC1, HDAC3 and HDAC10, and by the class III HDACs, SIRT1 AND SIRT2.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is one subunit of a cleavage factor required for 3' RNA cleavage and polyadenylation processing. The interaction of the protein with the RNA is one of the earliest steps in the assembly of the 3' end processing complex and facilitates the recruitment of other processing factors. This gene encodes the 25kD subunit of the protein complex, which is composed of four polypeptides. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	11051
Other Names	Cleavage and polyadenylation specificity factor subunit 5, Cleavage and polyadenylation specificity factor 25 kDa subunit, CPSF 25 kDa subunit, Cleavage factor Im complex 25 kDa subunit, CFIm25, Nucleoside diphosphate-linked moiety X motif 21, Nudix motif 21, Nudix hydrolase 21, Pre-mRNA cleavage factor Im 68 kDa subunit, NUDT21 (HGNC:13870)
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000

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	NUDT21 (HGNC:13870)
Function	Component of the cleavage factor Im (CFIm) complex that functions as an activator of the pre-mRNA 3'-end cleavage and polyadenylation processing required for the maturation of pre-mRNA into functional mRNAs (PubMed:14690600, PubMed:15937220, PubMed:17024186, PubMed:17098938, PubMed:29276085, PubMed:8626397, PubMed:9659921). CFIm contributes to the recruitment of multiprotein complexes on specific sequences on the pre-mRNA 3'-end, so called cleavage and polyadenylation signals (pA signals) (PubMed:14690600, PubMed:17024186, PubMed:8626397, PubMed:9659921). Most pre-mRNAs contain multiple pA signals, resulting in alternative cleavage and polyadenylation (APA) producing mRNAs with variable 3'-end formation (PubMed:17098938, PubMed:23187700, PubMed:29276085). The CFIm complex acts as a key regulator of cleavage and polyadenylation site choice during APA through its binding to 5'-UGUA-3' elements localized in the 3'- untranslated region (UTR) for a huge number of pre-mRNAs (PubMed:17098938, PubMed:20695905, PubMed:29276085). NUDT21/CPSF5 activates indirectly the mRNA 3'-processing machinery by recruiting CPSF6 and/or CPSF7 (PubMed:29276085). Binds to 5'-UGUA-3' elements localized upstream of pA signals that act as enhancers of pre-mRNA 3'- end processing (PubMed:14690600, PubMed:15169763, PubMed:17024186, PubMed:20479262, PubMed:22813749, PubMed:8626397). The homodimer mediates simultaneous sequence-specific recognition of two 5'-UGUA-3' elements within the pre-mRNA (PubMed:20479262, PubMed:21295486). Plays a role in somatic cell fate transitions and pluripotency by regulating widespread changes in gene expression through an APA-dependent function (By similarity). Binds to chromatin (By similarity). Binds to, but does not hydrolyze mono- and di-adenosine nucleotides (PubMed:18445629).
Cellular Location	Nucleus. Cytoplasm Note=Shuttles between the nucleus and the cytoplasm in a transcription- and XPO1/CRM1-independent manner, most probably in complex with the cleavage factor Im complex (CFIm) (PubMed:19864460) In punctate subnuclear structures localized adjacent to nuclear speckles, called paraspeckles (PubMed:15169763)
Tissue Location	Expressed in the heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas

Background

The protein encoded by this gene is one subunit of a cleavage factor required for 3' RNA cleavage and polyadenylation processing. The interaction of the protein with the RNA is one of the earliest steps in the assembly of the 3' end processing complex and facilitates the recruitment of other processing factors. This gene encodes the 25kD subunit of the protein complex, which is composed of four polypeptides. [provided by RefSeq, Jul 2008]

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