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CPSF5 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP1915b

Specification

CPSF5 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession	O43809

CPSF5 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 11051

Other Names
Cleavage and polyadenylation specificity factor subunit 5, Cleavage and polyadenylation specificity factor 25 kDa subunit, CFIm25, CPSF 25 kDa subunit, Nucleoside diphosphate-linked moiety X motif 21, Nudix motif 21, Pre-mRNA cleavage factor Im 25 kDa subunit, NUDT21, CFIM25, CPSF25, CPSF5

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP1915b was selected from the N-term region of human CPSF5. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CPSF5 Antibody (N-term) Blocking Peptide - 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:9659921, PubMed:8626397, PubMed:14690600, PubMed:15937220, PubMed:17024186, PubMed:17098938, PubMed:<a href="http://www.uniprot.org/citations/29276085"

target="_blank">29276085). 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:9659921, PubMed:8626397, PubMed:14690600, PubMed:17024186). 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:8626397, PubMed:14690600, PubMed:15169763, PubMed:17024186, PubMed:22813749, PubMed:20479262). 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

CPSF5 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

CPSF5 Antibody (N-term) Blocking Peptide - Images

CPSF5 Antibody (N-term) Blocking Peptide - Background

CPSF5 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. CPSF5

is the 25kD subunit of the protein complex, which is composed of four polypeptides.

CPSF5 Antibody (N-term) Blocking Peptide - References

Dettwiler, S., et al., J. Biol. Chem. 279(34):35788-35797 (2004).Lehner, B., et al., Genome Res. 14(7):1315-1323 (2004).de Vries, H., et al., EMBO J. 19(21):5895-5904 (2000).Ruegsegger, U., et al., Mol. Cell 1(2):243-253 (1998).Ruegsegger, U., et al., J. Biol. Chem. 271(11):6107-6113 (1996).