

KD-Validated Anti-CPSF6 Rabbit Monoclonal Antibody Rabbit monoclonal antibody Catalog # AGI2201

### **Specification**

## **KD-Validated Anti-CPSF6 Rabbit Monoclonal Antibody - Product Information**

Application Primary Accession Reactivity Clonality Isotype Calculated MW Gene Name Aliases	WB, FC, ICC <u>Q16630</u> Rat, Human, Mouse Monoclonal Rabbit IgG Predicted, 59 kDa; observed, 68 kDa KDa CPSF6 CPSF6; Cleavage And Polyadenylation Specific Factor 6; CFIM68; Cleavage Factor Im Complex 68 KDa Subunit; HPBRII-4; HPBRII-7; CFIM72; CFIM; Cleavage And Polyadenylation Specificity Factor 68 KDa Subunit; Cleavage And Polyadenylation Specificity Factor Subunit 6; Cleavage And Polyadenylation Specific Factor 6, 68kDa; Pre-MRNA Cleavage Factor Im 68 KDa Subunit; CPSF 68 KDa Subunit; Protein HPBRII-4/7; Cleavage And Polyadenylation Specific Factor 6, 68kD Subunit; Pre-MRNA Cleavage Factor I, 68kD Subunit; Pre-MRNA
Immunogen	A synthesized peptide derived from human CPSF6

#### KD-Validated Anti-CPSF6 Rabbit Monoclonal Antibody - Additional Information

Gene ID

**Other Names** 

Cleavage and polyadenylation specificity factor subunit 6, Cleavage and polyadenylation specificity factor 68 kDa subunit, CPSF 68 kDa subunit, Cleavage factor Im complex 68 kDa subunit, CFIm68, Pre-mRNA cleavage factor Im 68 kDa subunit, Protein HPBRII-4/7, CPSF6 (<a href="http://www.genenames.org/cgi-bin/gene\_symbol\_report?hgnc\_id=13871" target=" blank">HGNC:13871</a>)

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#### KD-Validated Anti-CPSF6 Rabbit Monoclonal Antibody - Protein Information

Name CPSF6 (<u>HGNC:13871</u>)

#### 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:<a href="http://www.uniprot.org/citations/14690600"">http://www.uniprot.org/citations/14690600</a>



target="\_blank">14690600</a>, PubMed:<a href="http://www.uniprot.org/citations/29276085" target="\_blank">29276085</a>, PubMed:<a href="http://www.uniprot.org/citations/8626397" target="\_blank">8626397</a>, PubMed:<a href="http://www.uniprot.org/citations/9659921" target="\_blank">9659921</a>). 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:<a href="http://www.uniprot.org/citations/14690600" target="\_blank">14690600</a>, PubMed:<a href="http://www.uniprot.org/citations/8626397"

target=" blank">8626397</a>, PubMed:<a href="http://www.uniprot.org/citations/9659921" target=" blank">9659921</a>). Most pre-mRNAs contain multiple pA signals, resulting in alternative cleavage and polyadenylation (APA) producing mRNAs with variable 3'-end formation (PubMed:<a href="http://www.uniprot.org/citations/23187700" target=" blank">23187700</a>, PubMed:<a href="http://www.uniprot.org/citations/29276085" target=" blank">29276085</a>). 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: <a href="http://www.uniprot.org/citations/20695905" target=" blank">20695905</a>, PubMed:<a href="http://www.uniprot.org/citations/29276085" target=" blank">29276085</a>). CPSF6 enhances NUDT21/CPSF5 binding to 5'-UGUA-3' elements localized upstream of pA signals and promotes RNA looping, and hence activates directly the mRNA 3'-processing machinery (PubMed: <a href="http://www.uniprot.org/citations/15169763" target=" blank">15169763</a>, PubMed:<a href="http://www.uniprot.org/citations/21295486" target=" blank">21295486</a>, PubMed:<a href="http://www.uniprot.org/citations/29276085" target=" blank">29276085</a>). Plays a role in mRNA export (PubMed:<a href="http://www.uniprot.org/citations/19864460" target=" blank">19864460</a>).

## **Cellular Location**

Nucleus. Nucleus, nucleoplasm. Nucleus speckle. 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). Colocalizes with PSPC1 in punctate subnuclear structures often located adjacent to nuclear speckles, called paraspeckles, and corresponding to interchromatin granules-associated zones (IGAZs) (PubMed:17267687). Distribution in speckles and paraspeckles varies during the cell cycle (PubMed:17267687). Associates at sites of active transcription on nascent perichromatin fibrils (PFs) and perichromatin granules (PubMed:17267687). Nuclear import is mediated via interaction with TNPO3 independently of CPSF6 phosphorylation status (PubMed:30916345).

# KD-Validated Anti-CPSF6 Rabbit Monoclonal Antibody - Protocols

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

- <u>Western Blot</u>
- <u>Blocking Peptides</u>
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

**KD-Validated Anti-CPSF6 Rabbit Monoclonal Antibody - Images** 





Western blotting analysis using anti-CPSF6 antibody (Cat#AGI2201). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-CPSF6 antibody (Cat#AGI2201, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-CPSF6 antibody (Cat#AGI2201). CPSF6 expression in wild-type (WT) and CPSF6 shRNA knockdown (KD) HeLa cells with 20  $\mu$ g of total cell lysates. Hsp90  $\alpha$  serves as a loading control. The blot was incubated with anti-CPSF6 antibody (Cat#AGI2201, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



CPSF6-Alexa Fluor® 647

Flow cytometric analysis of CPSF6 expression in HepG2 cells using anti-CPSF6 antibody (Cat#AGI2201, 1:2,000). Green, isotype control; red, CPSF6.





Immunocytochemical staining of HepG2 cells with anti-CPSF6 antibody (Cat#AGI2201, 1:1,000). Nuclei were stained blue with DAPI; CPSF6 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20  $\mu$ m.