

# CPSF6 (L16): sc-100692

## BACKGROUND

3' ends of eukaryotic mRNAs can undergo processing events that include endonucleolytic cleavage and polyadenylation. Cleavage and polyadenylation specificity factors (CPSF) mediate 3' cleavage of the transcript and subsequent polyadenylation. CPSF6, also known as CFIm68 (mammalian cleavage factor I, 68 kDa subunit), HPBRII-4 or HPBRII-7, is a member of the CPSF6/7 family and contains an N-terminal RNA recognition motif (RRM) and a C-terminal RS-like domain. Via its RS-like domain, CPSF6 interacts with SRp20, Tra-2 $\beta$  and 9G8. CPSF6 localizes to the paraspeckles and forms a heterodimer with NUDT21, comprising the CFIm complex which is essential for the first step in pre-mRNA 3' cleavage and polyadenylation processing. CPSF6 is the larger subunit of the complex and is present in only half of the two heterodimer combinations (the other half being a dimer of NUDT21 and CPSF7).

## REFERENCES

- Jenny, A., et al. 1996. Sequence similarity between the 73-kilodalton protein of mammalian CPSF and a subunit of yeast polyadenylation factor I. *Science* 274: 1514-1517.
- Salinas, C.A., et al. 1998. Characterization of a *Drosophila* homologue of the 160-kDa subunit of the cleavage and polyadenylation specificity factor CPSF. *Mol. Gen. Genet.* 257: 672-680.
- Edmonds, M. 2002. A history of poly A sequences: from formation to factors to function. *Prog. Nucleic Acid Res. Mol. Biol.* 71: 285-389.

## CHROMOSOMAL LOCATION

Genetic locus: CPSF6 (human) mapping to 12q15; Cpsf6 (mouse) mapping to 10 D2.

## SOURCE

CPSF6 (L16) is a mouse monoclonal antibody raised against recombinant CPSF6 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CPSF6 (L16) is recommended for detection of CPSF6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CPSF6 siRNA (h): sc-72990, CPSF6 siRNA (m): sc-72991, CPSF6 shRNA Plasmid (h): sc-72990-SH, CPSF6 shRNA Plasmid (m): sc-72991-SH, CPSF6 shRNA (h) Lentiviral Particles: sc-72990-V and CPSF6 shRNA (m) Lentiviral Particles: sc-72991-V.

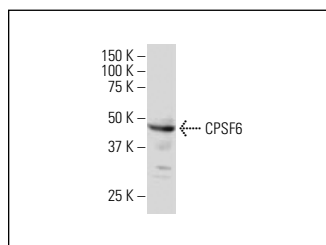
Molecular Weight of CPSF6: 68 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

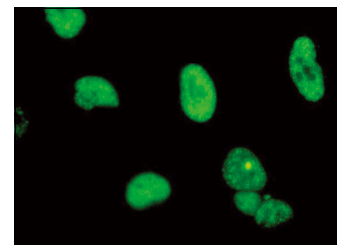
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



CPSF6 (L16): sc-100692. Western blot analysis of CPSF6 expression in HeLa whole cell lysate.



CPSF6 (L16): sc-100692. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

- Chandel, N., et al. 2013. VDR hypermethylation and HIV-induced T cell loss. *J. Leukoc. Biol.* 93: 623-631.
- Tang, H.W., et al. 2018. The TORC1-regulated CPA complex rewires an RNA processing network to drive autophagy and metabolic reprogramming. *Cell Metab.* 27: 1040-1054.e8.
- Wang, X., et al. 2020. Cellular cleavage and polyadenylation specificity factor 6 (CPSF6) mediates nuclear import of human bocavirus 1 NP1 protein and modulates viral capsid protein expression. *J. Virol.* 94: e01444-19.
- Borini Etichetti, C.M., et al. 2020. Expression of zebrafish CPSF6 in embryogenesis and role of protein domains on subcellular localization. *Gene Expr. Patterns* 36: 119114.
- Blake, D., et al. 2024. Alternative 3'UTR expression induced by T cell activation is regulated in a temporal and signal dependent manner. *Sci. Rep.* 14: 10987.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.