

CPSF7 (A-9): sc-393880

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. CPSF7 (cleavage and polyadenylation specific factor 7), also known as MGC9315, FLJ12529 or FLJ39024, is a 471 amino acid nuclear protein belonging to the RRM CPSF6/7 family. As a result of alternative splicing events, two CPSF7 isoforms exist. CPSF7 contains one RRM (RNA recognition motif) domain, and is encoded by a gene which maps to human chromosome 11q12.2. Chromosome 11 houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

CHROMOSOMAL LOCATION

Genetic locus: CPSF7 (human) mapping to 11q12.2; Cpsf7 (mouse) mapping to 19 A.

SOURCE

CPSF7 (A-9) is a mouse monoclonal antibody raised against amino acids 185-237 mapping within an internal region of CPSF7 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CPSF7 (A-9) is available conjugated to agarose (sc-393880 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393880 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393880 PE), fluorescein (sc-393880 FITC), Alexa Fluor® 488 (sc-393880 AF488), Alexa Fluor® 546 (sc-393880 AF546), Alexa Fluor® 594 (sc-393880 AF594) or Alexa Fluor® 647 (sc-393880 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393880 AF680) or Alexa Fluor® 790 (sc-393880 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CPSF7 (A-9) is recommended for detection of CPSF7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

CPSF7 (A-9) is also recommended for detection of CPSF7 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CPSF7 siRNA (h): sc-72992, CPSF7 siRNA (m): sc-72993, CPSF7 shRNA Plasmid (h): sc-72992-SH, CPSF7 shRNA Plasmid (m): sc-72993-SH, CPSF7 shRNA (h) Lentiviral Particles: sc-72992-V and CPSF7 shRNA (m) Lentiviral Particles: sc-72993-V.

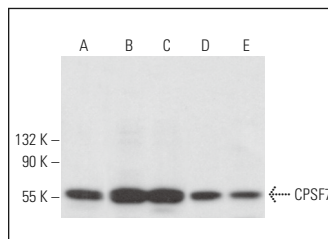
Molecular Weight of CPSF7: 52 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, IMR-32 cell lysate: sc-2409 or EOC 20 whole cell lysate: sc-364187.

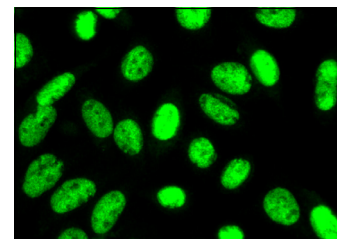
STORAGE

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

DATA



CPSF7 (A-9): sc-393880. Western blot analysis of CPSF7 expression in Jurkat (A), IMR-32 (B), HeLa (C), EOC 20 (D) and C6 (E) whole cell lysates.



CPSF7 (A-9): sc-393880. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Chang, J.W., et al. 2018. An integrative model for alternative polyadenylation, IntMAP, delineates mTOR-modulated endoplasmic reticulum stress response. *Nucleic Acids Res.* 46: 5996-6008.
- Hou, S., et al. 2019. XAB2 depletion induces intron retention in POLR2A to impair global transcription and promote cellular senescence. *Nucleic Acids Res.* 47: 8239-8254.
- Gerassimovich, Y.A., et al. 2021. Proximity-dependent biotinylation detects associations between SARS coronavirus nonstructural protein 1 and stress granule-associated proteins. *J. Biol. Chem.* 297: 101399.
- Zheng, L., et al. 2022. Piperlongumine synergistically enhances the anti-tumour activity of sorafenib by mediating ROS-AMPK activation and targeting CPSF7 in liver cancer. *Pharmacol. Res.* 177: 106140.
- Kitagawa, T., et al. 2022. AT-hook DNA-binding motif-containing protein one knockdown downregulates EWS-FLI1 transcriptional activity in Ewing's sarcoma cells. *PLoS ONE* 17: e0269077.
- de Prisco, N., et al. 2023. Alternative polyadenylation alters protein dosage by switching between intronic and 3'UTR sites. *Sci. Adv.* 9: eade4814.
- Mukherjee, S., et al. 2023. Macrophage differentiation is marked by increased abundance of the mRNA 3' end processing machinery, altered poly(A) site usage, and sensitivity to the level of CstF64. *Front. Immunol.* 14: 1091403.
- Luchsinger, C., et al. 2023. Formation of nuclear CPSF6/CPSF5 biomolecular condensates upon HIV-1 entry into the nucleus is important for productive infection. *Sci. Rep.* 13: 10974.

RESEARCH USE

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

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