SANTA CRUZ BIOTECHNOLOGY, INC.

CPSF3 (C-3): sc-393001

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

3' ends of eukaryotic mRNAs can undergo processing events that include endonucleolytic cleavage and polyadenylation. Cleavage and polyadenylation specificity factor (CPSF) mediates 3' cleavage of the transcript and subsequent polyadenylation. CPSF contains four subunits and localizes to the nucleoplasm where it recognizes the AAUAAA signal in pre-mRNA and interacts with other proteins to facilitate RNA cleavage and poly(A) synthesis. The human CPSF3 gene maps to chromosome 2p25.1 and encodes the second shortest subunit of cleavage and polyadenylation specificity factor. U1 snRNP-A protein (U1A) interacts with and affects the activity of CPSF by stabilizing the interaction of CPSF with the AAUAAA-containing RNAs to increase the efficiency of polyadenylation.

CHROMOSOMAL LOCATION

Genetic locus: CPSF3 (human) mapping to 2p25.1; Cpsf3 (mouse) mapping to 12 A1.2.

SOURCE

CPSF3 (C-3) is a mouse monoclonal antibody raised against amino acids 418-562 mapping within an internal region of CPSF3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CPSF3 (C-3) is available conjugated to agarose (sc-393001 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393001 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393001 PE), fluorescein (sc-393001 FITC), Alexa Fluor® 488 (sc-393001 AF488), Alexa Fluor® 546 (sc-393001 AF546), Alexa Fluor® 594 (sc-393001 AF594) or Alexa Fluor® 647 (sc-393001 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393001 AF680) or Alexa Fluor® 790 (sc-393001 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CPSF3 (C-3) is recommended for detection of CPSF3 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).

CPSF3 (C-3) is also recommended for detection of CPSF3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CPSF3 siRNA (h): sc-105243, CPSF3 siRNA (m): sc-142547, CPSF3 shRNA Plasmid (h): sc-105243-SH, CPSF3 shRNA Plasmid (m): sc-142547-SH, CPSF3 shRNA (h) Lentiviral Particles: sc-105243-V and CPSF3 shRNA (m) Lentiviral Particles: sc-142547-V.

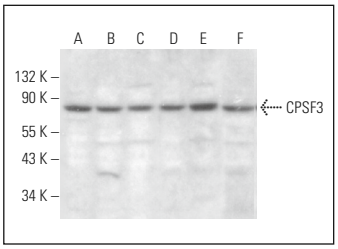
Molecular Weight of CPSF3: 73 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or NIH/3T3 whole cell lysate: sc-2210.

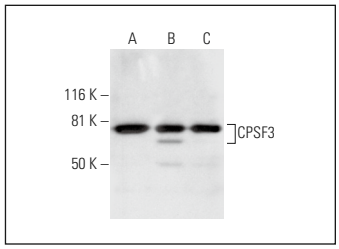
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



CPSF3 (C-3): sc-393001. Western blot analysis of CPSF3 expression in HeLa (**A**), NCI-H929 (**B**), SH-SY5Y (**C**), C2C12 (**D**) and RAW 264.7 (**E**) whole cell lysates and human tonsil tissue extract (**F**).



CPSF3 (C-3): sc-393001. Western blot analysis of CPSF3 expression in HeLa (**A**), Hep G2 (**B**) and NIH/3T3 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. 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.
2. Andreassi, C., et al. 2021. Cytoplasmic cleavage of IMPA1 3' UTR is necessary for maintaining axon integrity. Cell Rep. 34: 108778.
3. Liu, H., et al. 2022. Targeting the mRNA endonuclease CPSF73 inhibits breast cancer cell migration, invasion, and self-renewal. iScience 25: 104804.
4. 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.
5. Bate-Eya, L.T., et al. 2025. Sustained cancer-relevant alternative RNA splicing events driven by PRMT5 in high-risk neuroblastoma. Mol. Oncol. 19: 741-763.

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.