

CstF-50 (A-5): sc-393260



The Power to Question

BACKGROUND

Polyadenylation of mRNA precursors is a two-step reaction that requires multiple protein factors. The first step, endonucleolytic cleavage of polyadenylation substrates, requires CstF (cleavage stimulation factor), a heterotrimer that is composed of three distinct subunits. Heterotrimeric CstF recognizes GU- and U-rich sequences located downstream of the polyadenylation site on RNA. The shortest CstF subunit shares extensive homology with mammalian G protein β -subunits and has a transducin repeat domain, which is a 44 amino acid-long sequence that is repeated 7 times. CstF-50 interacts with the nuclear protein BARD1 (BRCA1-associated RING domain protein) and inhibits polyadenylation *in vitro*. CstF-50 may also be responsible for the interaction of the heterotrimeric CstF complex with other polyadenylation and 3'-end cleavage factors to form a stable complex on the pre-mRNA.

REFERENCES

1. Takagaki, Y., et al. 1990. A multisubunit factor, CstF, is required for polyadenylation of mammalian pre-mRNAs. *Genes Dev.* 4: 2112-2120.
2. Takagaki, Y. and Manley, J.L. 1992. A human polyadenylation factor is a G protein β -subunit homologue. *J. Biol. Chem.* 267: 23471-23474.
3. Takagaki, Y. and Manley, J.L. 1997. RNA recognition by the human polyadenylation factor CstF. *Mol. Cell. Biol.* 17: 3907-3914.
4. Kleiman, F.E. and Manley, J.L. 1999. Functional interaction of BRCA1-associated BARD1 with polyadenylation factor CstF-50. *Science* 285: 1576-1579.

CHROMOSOMAL LOCATION

Genetic locus: CSTF1 (human) mapping to 20q13.2; Cstf1 (mouse) mapping to 2 H3.

SOURCE

CstF-50 (A-5) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of CstF-50 of human origin.

PRODUCT

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

CstF-50 (A-5) is available conjugated to agarose (sc-393260 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393260 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393260 PE), fluorescein (sc-393260 FITC), Alexa Fluor[®] 488 (sc-393260 AF488), Alexa Fluor[®] 546 (sc-393260 AF546), Alexa Fluor[®] 594 (sc-393260 AF594) or Alexa Fluor[®] 647 (sc-393260 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393260 AF680) or Alexa Fluor[®] 790 (sc-393260 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

CstF-50 (A-5) is recommended for detection of CstF-50 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

CstF-50 (A-5) is also recommended for detection of CstF-50 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CstF-50 siRNA (h): sc-37753, CstF-50 siRNA (m): sc-37754, CstF-50 shRNA Plasmid (h): sc-37753-SH, CstF-50 shRNA Plasmid (m): sc-37754-SH, CstF-50 shRNA (h) Lentiviral Particles: sc-37753-V and CstF-50 shRNA (m) Lentiviral Particles: sc-37754-V.

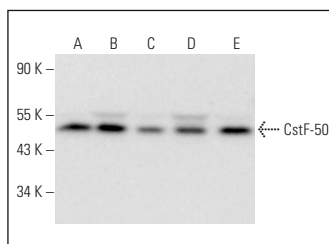
Molecular Weight of CstF-50: 55 kDa.

Positive Controls: CstF-50 (h2): 293T Lysate: sc-175903, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

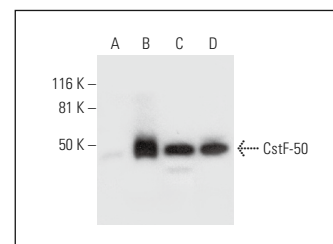
RECOMMENDED SUPPORT REAGENTS

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



CstF-50 (A-5): sc-393260. Western blot analysis of CstF-50 expression in HeLa (A), A-673 (B), BC₃H1 (C), C2C12 (D) and 3T3-L1 (E) whole cell lysates.



CstF-50 (A-5): sc-393260. Western blot analysis of CstF-50 expression in non-transfected 293T: sc-117752 (A), human CstF-50 transfected 293T: sc-175903 (B), HeLa (C) and NIH/3T3 (D) 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.

RESEARCH USE

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