SANTA CRUZ BIOTECHNOLOGY, INC.

CstF-50 (H-8): sc-393317

SANTA CRUZ BIOTECHNOLOGY

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 poly-adenylation 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 seven times. CstF-50 interacts with the nuclear protein BARD1 (BRCA1-associated RING domain protein) and inhibits poly-adenylation *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., Manley, J.L., MacDonald, C.C., Wilusz, J. and Shenk, T. 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.
5. Takagaki, Y. and Manley, J.L. 2000. Complex protein interactions within the human polyadenylation machinery identify a novel component. Mol. Cell. Biol. 20: 1515-1525.

CHROMOSOMAL LOCATION

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

SOURCE

CstF-50 (H-8) 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 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

CstF-50 (H-8) 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 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).

CstF-50 (H-8) 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.

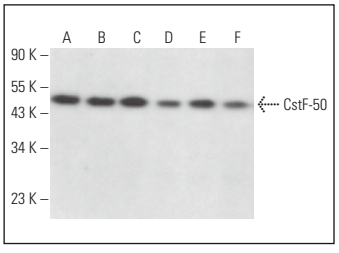
Molecular Weight of CstF-50: 55 kDa.

Positive Controls: A-673 cell lysate: sc-2414, K-562 nuclear extract: sc-2130 or Jurkat nuclear extract: sc-2132.

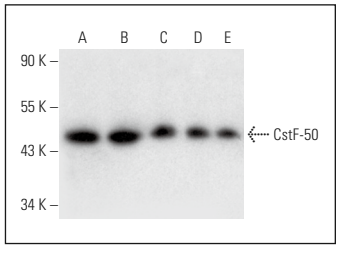
RECOMMENDED SUPPORT REAGENTS

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



CstF-50 (H-8): sc-393317. Western blot analysis of CstF-50 expression in A-431 (**A**), A-673 (**B**), SJRH30 (**C**), BC_3H1 (**D**), NIH/3T3 (**E**) and C2C12 (**F**) whole cell lysates.



CstF-50 (H-8): sc-393317. Western blot analysis of CstF-50 expression in A-431 (**A**), Jurkat (**B**), K-562 (**C**) and SK-BR-3 (**D**) nuclear extracts and HeLa whole cell lysate (**E**).

RESEARCH USE

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