

# CstF-50 (G-3): sc-393962

## 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  $\beta$ -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  $\beta$ -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 (G-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 372-397 near the C-terminus of CstF-50 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\gamma_1$  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](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

CstF-50 (G-3) 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  $\mu$ 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).

CstF-50 (G-3) is also recommended for detection of CstF-50 in additional species, including equine, canine, bovine, porcine and avian.

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.

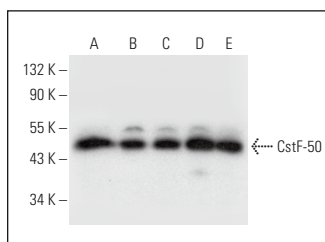
Positive Controls: F9 cell lysate: sc-2245, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

## RECOMMENDED SUPPORT REAGENTS

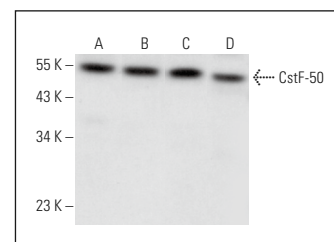
To ensure optimal results, the following support reagents are recommended:

- 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



CstF-50 (G-3): sc-393962. 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).



CstF-50 (G-3): sc-393962. Western blot analysis of CstF-50 expression in Jurkat (A), SJRH30 (B), F9 (C) and KNRK (D) whole cell lysates.

## RESEARCH USE

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