

CstF-77 (G-5): sc-376575

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. CstF-77 (cleavage stimulation factor, 77 kDa subunit), also known as CstF3, is one of the three subunits comprising CstF. It can exist as a homodimer and functions as the bridge, directly interacting with the other two CstF subunits, namely CstF-64 and CstF-50. CstF-77 is highly conserved among eukaryotes. It contains an α -helical structure with 11 HAT (half-a-TPR-containing) repeats and is essential for CstF assembly. In addition, CstF-77 is capable of interacting with CPSF1 and FCP1, other factors involved in polyadenylation.

CHROMOSOMAL LOCATION

Genetic locus: CSTF3 (human) mapping to 11p13; Cstf3 (mouse) mapping to 2 E2.

SOURCE

CstF-77 (G-5) is a mouse monoclonal antibody raised against amino acids 31-330 mapping near the N-terminus of CstF-77 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CstF-77 (G-5) is available conjugated to agarose (sc-376575 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376575 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376575 PE), fluorescein (sc-376575 FITC), Alexa Fluor® 488 (sc-376575 AF488), Alexa Fluor® 546 (sc-376575 AF546), Alexa Fluor® 594 (sc-376575 AF594) or Alexa Fluor® 647 (sc-376575 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376575 AF680) or Alexa Fluor® 790 (sc-376575 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CstF-77 (G-5) is recommended for detection of CstF-77 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-77 (G-5) is also recommended for detection of CstF-77 in additional species, including canine, bovine and avian.

Suitable for use as control antibody for CstF-77 siRNA (h): sc-96385, CstF-77 siRNA (m): sc-142610, CstF-77 shRNA Plasmid (h): sc-96385-SH, CstF-77 shRNA Plasmid (m): sc-142610-SH, CstF-77 shRNA (h) Lentiviral Particles: sc-96385-V and CstF-77 shRNA (m) Lentiviral Particles: sc-142610-V.

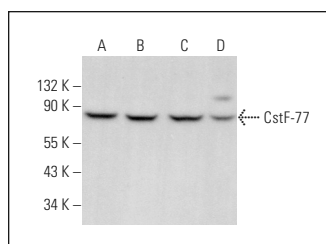
Molecular Weight of CstF-77: 77 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, 3T3-L1 cell lysate: sc-2243 or NIH/3T3 whole cell lysate: sc-2210.

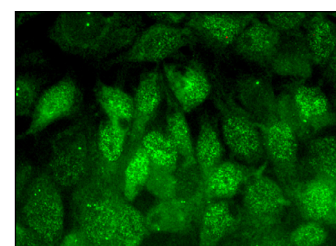
RECOMMENDED SUPPORT REAGENTS

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-77 (G-5): sc-376575. Western blot analysis of CstF-77 expression in MCF7 (A), NIH/3T3 (B), 3T3-L1 (C) and KNRK (D) whole cell lysates.



CstF-77 (G-5): sc-376575. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Liu, H., et al. 2022. Targeting the mRNA endonuclease CPSF73 inhibits breast cancer cell migration, invasion, and self-renewal. *iScience* 25: 104804.
- 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.

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.

PROTOCOLS

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

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