

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.

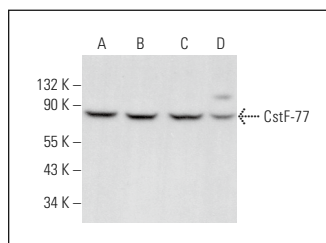
Molecular Weight of CstF-77: 77 kDa.

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

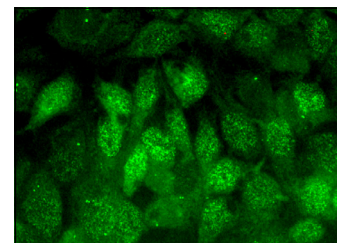
RECOMMENDED SUPPORT REAGENTS

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

1. Liu, H., et al. 2022. Targeting the mRNA endonuclease CPSF73 inhibits breast cancer cell migration, invasion, and self-renewal. *iScience* 25: 104804.
2. 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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA