

Hdf1 (C-10): sc-166798

BACKGROUND

Telomeric DNA is bound by the transcription regulator Rap1 (repressor activator protein 1, also designated Grf1). In addition to playing a role in silencing the HM mating-type loci, Rap1 is involved in the repression of genes located adjacent to the telomeres, a phenomenon known as telomere position effect (TPE). The silent information regulator proteins Sir2 (also designated Mar1), Sir3 (also designated Mar2, Ste8 or Cmt1) and Sir4 (also designated Ste9, Asd1 or Uth2) form a complex with Rap1. These proteins are essential for TPE silencing and HM structure. Sir1 is essential for silencing the HM mating-type loci, but it has no effect on Tpe. Tel1, a member of the PI 3-kinase family and a homolog of the human ataxia telangiectasia protein, is involved in controlling telomere length. Hdf1 (also referred to as Ku-70), a homolog of the mammalian Ku-70, also plays a role in maintaining telomere length.

REFERENCES

1. Kyrion, G., et al. 1993. Rap1 and telomere structure regulate telomere position effects in *Saccharomyces cerevisiae*. *Genes Dev.* 7: 1146-1159.
2. Palladino, F., et al. 1993. Sir3 and Sir4 proteins are required for the positioning and integrity of yeast telomeres. *Cell* 75: 543-555.
3. Cockell, M., et al. 1995. The carboxy-termini of Sir4 and Rap1 affect Sir3 localization: evidence for a multicomponent complex required for yeast telomeric silencing. *J. Cell Biol.* 129: 909-924.
4. Greenwell, P.W., et al. 1995. Tel1, a gene involved in controlling telomere length in *S. cerevisiae*, is homologous to the human ataxia telangiectasia gene. *Cell* 82: 823-829.
5. Porter, S.E., et al. 1996. The DNA-binding protein Hdf1p (a putative Ku homologue) is required for maintaining normal telomere length in *Saccharomyces cerevisiae*. *Nucleic Acids Res.* 24: 582-585.
6. Tsukamoto, Y., et al. 1997. Silencing factors participate in DNA repair and recombination in *Saccharomyces cerevisiae*. *Nature* 388: 900-903.

SOURCE

Hdf1 (C-10) is a mouse monoclonal antibody raised against amino acids 303-602 mapping at the C-terminus of Hdf1 of *Saccharomyces cerevisiae* origin.

PRODUCT

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

Hdf1 (C-10) is available conjugated to agarose (sc-166798 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166798 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166798 PE), fluorescein (sc-166798 FITC), Alexa Fluor® 488 (sc-166798 AF488), Alexa Fluor® 546 (sc-166798 AF546), Alexa Fluor® 594 (sc-166798 AF594) or Alexa Fluor® 647 (sc-166798 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166798 AF680) or Alexa Fluor® 790 (sc-166798 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

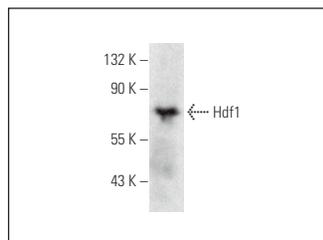
APPLICATIONS

Hdf1 (C-10) is recommended for detection of Hdf1 of *Saccharomyces cerevisiae* 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).

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



Hdf1 (C-10): sc-166798. Western blot analysis of Hdf1 expression in yeast extract.

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.