SANTA CRUZ BIOTECHNOLOGY, INC.

HCF1 (H-8): sc-390950

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The herpes simplex virus infection is initiated by VP16, a viral transcription factor that activates the viral immediate-early (IE) genes. VP16 recognizes the IE gene promoters by forming a multiprotein complex with Oct-1 and HCF1 (host cell factor 1), a nuclear protein required for progression through the G_1 phase of the cell cycle. This multiprotein complex, called C1, is responsible for transcription of the HSV immediate-early genes and may be critical for the regulation of the HSV lytic-latent cycle. HCF1 is cleaved posttranslationally into separate, but associated, N- and C-terminal polypeptides. The cytoplasmic N-terminal fragment of HCF1 arises by proteolysis of full length HCF1 and associates with VP16. The C-terminal polypeptide of HCF1, distinct from the form of HCF1 that interacts with VP16, exists in a nuclear complex with protein phosphatase 1.

REFERENCES

1. Johnson, K.M., et al. 1999. Herpes simplex virus transactivator VP16 discriminates between HCF1 and a novel family member, HCF2. J. Virol. 73: 3930-3940.
2. Ajuh, P.M., et al. 2000. Association of a protein phosphatase 1 activity with the human factor C1 (HCF) complex. Nucleic Acids Res. 28: 678-686.
3. Lu, R. and Misra, V. 2000. Zhangfei: a second cellular protein interacts with herpes simplex virus accessory factor HCF in a manner similar to Luman and VP16. Nucleic Acids Res. 28: 2446-2454.
4. Vogel, J.L. and Kristie, T.M. 2000. The novel coactivator C1 (HCF) coordinates multiprotein enhancer formation and mediates transcription activation by GABP. EMBO J. 19: 683-690.

CHROMOSOMAL LOCATION

Genetic locus: HCFC1 (human) mapping to Xq28; Hcfc1 (mouse) mapping to X A7.3.

SOURCE

HCF1 (H-8) is a mouse monoclonal antibody raised against amino acids 206-251 mapping near the N-terminus of HCF1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HCF1 (H-8) is available conjugated to agarose (sc-390950 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390950 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390950 PE), fluorescein (sc-390950 FITC), Alexa Fluor® 488 (sc-390950 AF488), Alexa Fluor® 546 (sc-390950 AF546), Alexa Fluor® 594 (sc-390950 AF594) or Alexa Fluor® 647 (sc-390950 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390950 AF680) or Alexa Fluor® 790 (sc-390950 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

HCF1 (H-8) is recommended for detection of HCF1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HCF1 siRNA (h): sc-37996, HCF1 siRNA (m): sc-37997, HCF1 shRNA Plasmid (h): sc-37996-SH, HCF1 shRNA Plasmid (m): sc-37997-SH, HCF1 shRNA (h) Lentiviral Particles: sc-37996-V and HCF1 shRNA (m) Lentiviral Particles: sc-37997-V.

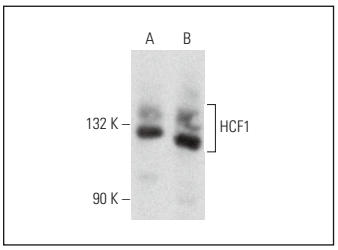
Molecular Weight of full-length HCF1 precursor: 230 kDa.

Molecular Weight of HCF1 polypeptide: 100 kDa.

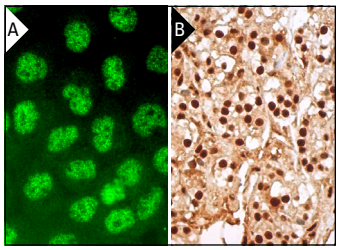
Molecular Weight of HCF1 subunits: 123-135 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

DATA



HCF1 (H-8): sc-390950. Western blot analysis of HCF1 expression in K-562 (**A**) and Jurkat (**B**) whole cell lysates.



HCF1 (H-8): sc-390950. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human parathyroid gland tissue showing nuclear and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Hancock, M.L., et al. 2019. Insulin receptor associates with promoters genome-wide and regulates gene expression. Cell 177: 722-736.e22.
2. Wu, J., et al. 2020. Host cell factors stimulate HIV-1 transcription by antagonizing substrate-binding function of Siah1 ubiquitin ligase to stabilize transcription elongation factor ELL2. Nucleic Acids Res. 48: 7321-7332.
3. Puvvula, P.K., et al. 2021. Inhibiting an RBM39/MLL1 epigenomic regulatory complex with dominant-negative peptides disrupts cancer cell transcription and proliferation. Cell Rep. 35: 109156.
4. Liu, S., et al. 2022. Hi-TrAC reveals division of labor of transcription factors in organizing chromatin loops. Nat. Commun. 13: 6679.

RESEARCH USE

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