

CtIP (F-2): sc-28324

BACKGROUND

CtBP1 is a cellular phosphoprotein that associates with various proteins and functions as a co-repressor of transcription. CtBP1 and the related protein CtBP2 are characterized as C-terminal binding protein of adenovirus E1A, and they preferentially associate with the E1A via a 5 amino acid motif, PLDLS, to repress E1A-induced oncogenesis and cellular transformation. CtBP1 is expressed from embryo to adult, but CtBP2 is mainly expressed during embryogenesis. During skeletal and T cell development, CtBP1 and CtBP2 associate with the PLDSL domain of δ EF1, a cellular zinc finger-homeodomain protein, and thereby enhance δ EF1-induced transcriptional silencing. In addition, CtBP complexes with CtIP, a protein that recognizes distinctly different protein motifs from CtBP. CtIP binds to the BRCT repeats within the breast cancer gene BRCA1 and enables CtBP to influence BRCA1 activity. CtIP/CtBP binding to BRCA1 inhibits the transactivation of the p21 promoter, and it is critical for regulating p21 transcription in response to DNA damage.

REFERENCES

- Sollerbrant, K., et al. 1996. The CtBP binding domain in the adenovirus E1A protein controls CR1-dependent transactivation. *Nucleic Acids Res.* 24: 2578-2584.
- Sekido, R., et al. 1997. Two mechanisms in the action of repressor δ EF1: binding site competition with an activator and active repression. *Genes Cells* 2: 771-783.
- Schaeper, U., et al. 1998. Interaction between a cellular protein that binds to the C-terminal region of adenovirus E1A (CtBP) and a novel cellular protein is disrupted by E1A through a conserved PLDSL motif. *J. Biol. Chem.* 273: 8549-8552.
- Turner, J., et al. 1998. Cloning and characterization of mCtBP2, a co-repressor that associates with basic Krüppel-like factor and other mammalian transcriptional regulators. *EMBO J.* 17: 5129-5140.
- Wong, A.K., et al. 1998. Characterization of a carboxy-terminal BRCA1 interacting protein. *Oncogene* 17: 2279-2285.
- Yu, X., et al. 1998. The C-terminal (BRCT) domains of BRCA1 interact *in vivo* with CtIP, a protein implicated in the CtBP pathway of transcriptional repression. *J. Biol. Chem.* 273: 25388-25392.
- Furusawa, T., et al. 1999. Identification of CtBP1 and CtBP2 as corepressors of zinc finger-homeodomain factor δ EF1. *Mol. Cell. Biol.* 19: 8581-8590.

CHROMOSOMAL LOCATION

Genetic locus: RBBP8 (human) mapping to 18q11.2; Rbbp8 (mouse) mapping to 18 A1.

SOURCE

CtIP (F-2) is a mouse monoclonal antibody raised against amino acids 598-897 of CtIP 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.

APPLICATIONS

CtIP (F-2) is recommended for detection of CtIP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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).

Suitable for use as control antibody for CtIP siRNA (h): sc-37765, CtIP siRNA (m): sc-37766, CtIP shRNA Plasmid (h): sc-37765-SH, CtIP shRNA Plasmid (m): sc-37766-SH, CtIP shRNA (h) Lentiviral Particles: sc-37765-V and CtIP shRNA (m) Lentiviral Particles: sc-37766-V.

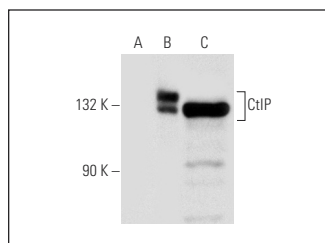
Molecular Weight of CtIP: 125 kDa.

Positive Controls: T24 cell lysate: sc-2292, CtIP (m): 293T Lysate: sc-119500 or Jurkat nuclear extract: sc-2132.

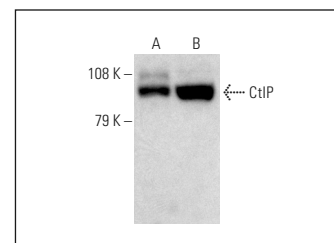
RECOMMENDED SUPPORT REAGENTS

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



CtIP (F-2): sc-28324. Western blot analysis of CtIP expression in non-transfected 293T: sc-117752 (A), mouse CtIP transfected 293T: sc-119500 (B) and Jurkat (C) whole cell lysates.



CtIP (F-2): sc-28324. Western blot analysis of CtIP expression in T24 whole cell lysate (A) and Jurkat nuclear extract (B).

SELECT PRODUCT CITATIONS

- Chen, Y., et al. 2017. And-1 coordinates with CtIP for efficient homologous recombination and DNA damage checkpoint maintenance. *Nucleic Acids Res.* 45: 2516-2530.

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.