

CtIP (E-2): sc-48415

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 PLDLSL 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

1. Sollerbrant, K., et al. 1996. The CtBP binding domain in the adenovirus E1A protein controls CR1-dependent transactivation. *Nucleic Acids Res.* 24: 2578-2584.
2. 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.

CHROMOSOMAL LOCATION

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

SOURCE

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

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CtIP (E-2) is recommended for detection of CtIP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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).

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.

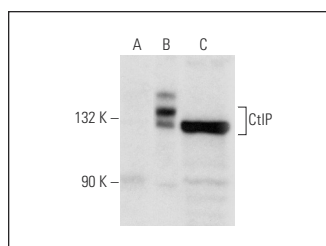
Molecular Weight of CtIP: 125 kDa.

Positive Controls: CtIP (m): 293T Lysate: sc-119500, Jurkat whole cell lysate: sc-2204 or Jurkat nuclear extract: sc-2132.

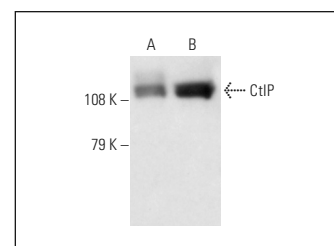
RECOMMENDED SUPPORT REAGENTS

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 (E-2): sc-48415. 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 (E-2): sc-48415. Western blot analysis of CtIP expression in T24 whole cell lysate (A) and Jurkat nuclear extract (B).

SELECT PRODUCT CITATIONS

1. O'Sullivan, R.J., et al. 2014. Rapid induction of alternative lengthening of telomeres by depletion of the histone chaperone ASF1. *Nat. Struct. Mol. Biol.* 21: 167-174.
2. Biehs, R., et al. 2017. DNA double-strand break resection occurs during non-homologous end joining in G₁ but is distinct from resection during homologous recombination. *Mol. Cell* 65: 671-684.e5.
3. Qiu, Z., et al. 2022. PLK1-mediated phosphorylation of PP1L2 regulates HR via CtIP. *Front. Cell Dev. Biol.* 10: 902403.

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.