SANTA CRUZ BIOTECHNOLOGY, INC.

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 μg lgG_1 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 K BP-HRP: sc-516102 or m-IgG K 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 K BP-FITC: sc-516140 or m-IgG K 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. CtlP (E-2): sc-48415. Western blot analysis of CtlP expression in T24 whole cell lysate (\bf{A}) and Jurkat nuclear extract (\bf{B}).

SELECT PRODUCT CITATIONS

- 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.
- 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.
- Qiu, Z., et al. 2022. PLK1-mediated phosphorylation of PPIL2 regulates HR via CtIP. Front. Cell Dev. Biol. 10: 902403.

STORAGE

Store at 4° C, **D0 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.