

CtBP1 (m): 293T Lysate: sc-119492

BACKGROUND

CtBP1 is a cellular phosphoprotein that associates with various proteins and functions as a corepressor of transcription. CtBP1 and the related protein CtBP2 are characterized as C-terminal binding proteins 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 enhances 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.
3. Wong, A.K., et al. 1998. Characterization of a carboxy-terminal BRCA1 interacting protein. *Oncogene* 17: 2279-2285.
4. 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 PLDLS motif. *J. Biol. Chem.* 273: 8549-8552.
5. 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.
6. Turner, J., et al. 1998. Cloning and characterization of mCtBP2, a corepressor that associates with basic Krüppel-like factor and other mammalian transcriptional regulators. *EMBO J.* 17: 5129-5140.
7. 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.
8. Li, S., et al. 1999. Binding of CtIP to the BRCT repeats of BRCA1 involved in the transcription regulation of p21 is disrupted upon DNA damage. *J. Biol. Chem.* 274: 11334-11338.
9. Pagan, J.K., et al. 2007. A novel corepressor, BCOR-L1, represses transcription through an interaction with CtBP. *J. Biol. Chem.* 282: 15248-15257.

CHROMOSOMAL LOCATION

Genetic locus: Ctbp1 (mouse) mapping to 5 B1.

RESEARCH USE

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

PRODUCT

CtBP1 (m): 293T Lysate represents a lysate of mouse CtBP1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

CtBP1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive CtBP1 antibodies. Recommended use: 10-20 μ l per lane.

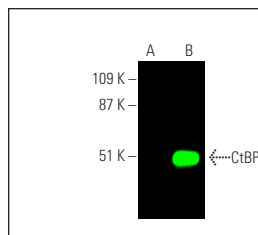
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CtBP (E-12): sc-17759 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse CtBP1 expression in CtBP1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

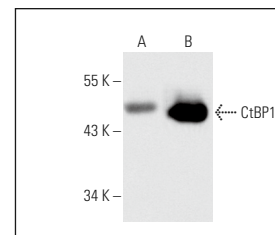
RECOMMENDED SUPPORT REAGENTS

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.

DATA



CtBP (E-12): sc-17759. Near-infrared western blot analysis of CtBP expression in non-transfected: sc-117752 (A) and mouse CtBP1 transfected: sc-119492 (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 680: sc-516180.



CtBP (E-12): sc-17759. Western blot analysis of CtBP1 expression in non-transfected: sc-117752 (A) and mouse CtBP1 transfected: sc-119492 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.