

CtBP (H-440): sc-11390

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 protein of adenovirus E1A, and they preferentially associate with the E1A via a 5-amino acid motif, PLDSL, 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 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. Wong, A.K., et al. 1998. Characterization of a carboxy-terminal BRCA1 interacting protein. *Oncogene* 17: 2279-2285.

CHROMOSOMAL LOCATION

Genetic locus: CTBP1 (human) mapping to 4p16.3, CTBP2 (human) mapping to 10q26.13; Ctbp1 (mouse) mapping to 5 B1, Ctbp2 (mouse) mapping to 7 F3.

SOURCE

CtBP (H-440) is a rabbit polyclonal antibody raised against amino acids 1-440 of CtBP of human origin.

PRODUCT

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

APPLICATIONS

CtBP (H-440) is recommended for detection of CtBP1 and CtBP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), 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).

Molecular Weight of CtBP: 48 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, CtBP1 (h): 293T Lysate: sc-171371 or HeLa nuclear extract: sc-2120.

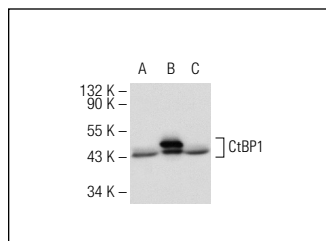
RESEARCH USE

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

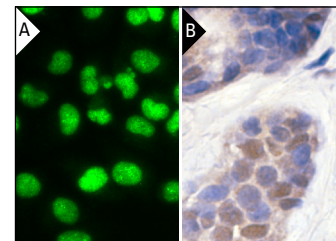
STORAGE

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

DATA



CtBP (H-440): sc-11390. Western blot analysis of CtBP1 expression in non-transfected: sc-117752 (A) and human CtBP1 transfected: sc-171371 (B) 293T whole cell lysates and HeLa nuclear extract (C).



CtBP (H-440): sc-11390. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing nuclear staining (B).

SELECT PRODUCT CITATIONS

1. van Grunsven, L.A., et al. 2003. Interaction between Smad-interacting protein-1 and the corepressor C-terminal binding protein is dispensable for transcriptional repression of E-cadherin. *J. Biol. Chem.* 278: 26135-26145.
2. Fernandes, I., et al. 2003. Ligand-dependent nuclear receptor corepressor LCoR functions by histone deacetylase-dependent and -independent mechanisms. *Mol. Cell* 11: 139-150.
3. Deshpande, A.M., et al. 2007. PHC3, a component of the hPRC-H complex, associates with E2F6 during G₀ and is lost in osteosarcoma tumors. *Oncogene* 26: 1714-1722.
4. Perissi, V., et al. 2008. TBL1 and TBLR1 phosphorylation on regulated gene promoters overcomes dual CtBP and NCoR/SMRT transcriptional repression checkpoints. *Mol. Cell* 29: 755-766.
5. Banck, M.S., et al. 2009. The ZNF217 oncogene is a candidate organizer of repressive histone modifiers. *Epigenetics* 4: 100-106.
6. Palijan, A., et al. 2009. Ligand-dependent corepressor LCoR is an attenuator of progesterone-regulated gene expression. *J. Biol. Chem.* 284: 30275-30287.
7. Chiaro, C., et al. 2012. Tcf3 and cell cycle factors contribute to butyrate resistance in colorectal cancer cells. *Biochem. Biophys. Res. Commun.* 428: 121-126.



Try **CtBP (E-12): sc-17759** or **CtBP (C-1): sc-17805**, our highly recommended monoclonal alternatives to CtBP (H-440). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **CtBP (E-12): sc-17759**.