

CtBP1 (G-5): sc-376004

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, 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 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. 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.
4. 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.

CHROMOSOMAL LOCATION

Genetic locus: CTBP1 (human) mapping to 4p16.3; Ctbp1 (mouse) mapping to 5 B1.

SOURCE

CtBP1 (G-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 411-437 at the C-terminus of CtBP1 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.

Blocking peptide available for competition studies, sc-376004 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

CtBP1 (G-5) is recommended for detection of CtBP1 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).

CtBP1 (G-5) is also recommended for detection of CtBP1 in additional species, including bovine.

Suitable for use as control antibody for CtBP1 siRNA (h): sc-35122, CtBP1 siRNA (m): sc-35121, CtBP1 shRNA Plasmid (h): sc-35122-SH, CtBP1 shRNA Plasmid (m): sc-35121-SH, CtBP1 shRNA (h) Lentiviral Particles: sc-35122-V and CtBP1 shRNA (m) Lentiviral Particles: sc-35121-V.

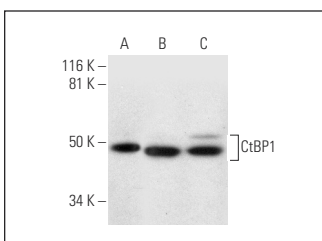
Molecular Weight of CtBP1: 48 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, HeLa nuclear extract: sc-2120 or KNRK nuclear extract: sc-2141.

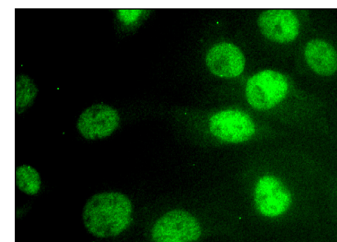
RECOMMENDED SUPPORT REAGENTS

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



CtBP1 (G-5): sc-376004. Western blot analysis of CtBP1 expression in HeLa (A), NIH/3T3 (B) and KNRK (C) nuclear extracts.



CtBP1 (G-5): sc-376004. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

RESEARCH USE

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



See **CtBP (E-12): sc-17759** for CtBP antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.