

# CtBP1 (K-15): sc-5961

## 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 PLDSL domain of  $\delta$ EF1, a cellular zinc finger-homeo-domain protein, and thereby enhances  $\delta$ 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  $\delta$ 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. 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 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CtBP1 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-5961 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

CtBP1 (K-15) is recommended for detection of CtBP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

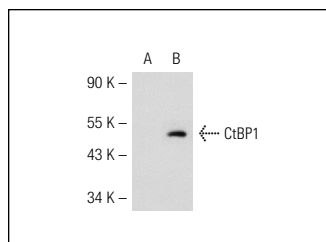
CtBP1 (K-15) is also recommended for detection of CtBP1 in additional species, including equine, canine, bovine and avian.

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.

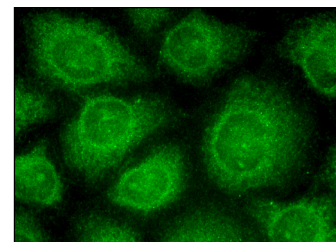
Molecular Weight of CtBP1: 48 kDa.

Positive Controls: CtBP1 (m): 293T Lysate: sc-119492, HeLa nuclear extract: sc-2120 or KNRK nuclear extract: sc-2141.

## DATA



CtBP1 (K-15): sc-5961. Western blot analysis of CtBP1 expression in non-transfected: sc-117752 (A) and mouse CtBP1 transfected: sc-119492 (B) 293T whole cell lysates.



CtBP1 (K-15): sc-5961. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

## SELECT PRODUCT CITATIONS

1. Ku, W.C., et al. 2009. Complementary quantitative proteomics reveals that transcription factor AP-4 mediates E-box-dependent complex formation for transcriptional repression of HDM2. *Mol. Cell. Proteomics* 8: 2034-2050.
2. Viñas-Castells, R., et al. 2010. The hypoxia-controlled FBXL14 ubiquitin ligase targets SNAIL1 for proteasome degradation. *J. Biol. Chem.* 285: 3794-3805.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **CtBP (E-12): sc-17759** or **CtBP1 (G-6): sc-398945**, our highly recommended monoclonal alternatives to CtBP1 (K-15). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **CtBP (E-12): sc-17759**.