SANTA CRUZ BIOTECHNOLOGY, INC.

CtIP (D-4): sc-271339

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 five 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 dEF1, a cellular zinc finger-homeodomain protein, and thereby enhance dEF1-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.

CHROMOSOMAL LOCATION

Genetic locus: RBBP8 (human) mapping to 18q11.2; Rbbp8 (mouse) mapping to 18 A1.

SOURCE

CtIP (D-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 835-865 near the C-terminus of CtIP of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CtIP (D-4) is available conjugated to agarose (sc-271339 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271339 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271339 PE), fluorescein (sc-271339 FITC), Alexa Fluor® 488 (sc-271339 AF488), Alexa Fluor® 546 (sc-271339 AF546), Alexa Fluor® 594 (sc-271339 AF594) or Alexa Fluor® 647 (sc-271339 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271339 AF680) or Alexa Fluor® 790 (sc-271339 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271339 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

PROTOCOLS

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

APPLICATIONS

CtIP (D-4) 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 µg per 100-500 µg 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).

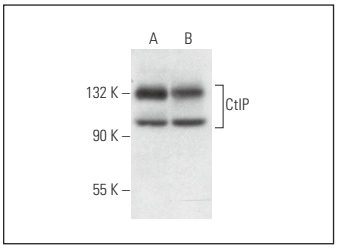
CtIP (D-4) is also recommended for detection of CtIP in additional species, including canine and avian.

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.

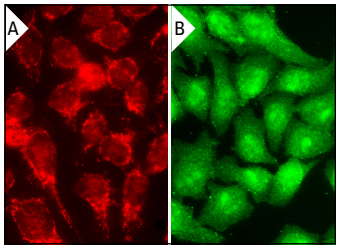
Molecular Weight of CtIP: 125 kDa.

Positive Controls: T24 cell lysate: sc-2292, F9 cell lysate: sc-2245 or Jurkat whole cell lysate: sc-2204.

DATA



CtIP (D-4): sc-271339. Western blot analysis of CtIP expression in T24 (**A**) and F9 (**B**) whole cell lysates.



CtIP (D-4): sc-271339. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization (**A**). Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear and cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Rai, R., et al. 2010. The function of classical and alternative non-homologous end-joining pathways in the fusion of dysfunctional telomeres. EMBO J. 29: 2598-2610.
2. Biehs, R., et al. 2017. DNA double-strand break resection occurs during non-homologous end joining in G_1 but is distinct from resection during homologous recombination. Mol. Cell 65: 671-684.e5.
3. Shou, J., et al. 2018. Precise and predictable CRISPR chromosomal rearrangements reveal principles of Cas9-mediated nucleotide insertion. Mol. Cell 71: 498-509.e4.
4. Hu, Q., et al. 2019. Break-induced replication plays a prominent role in long-range repeat-mediated deletion. EMBO J. 38: e101751.
5. Ohba, S., et al. 2020. Phosphoglycerate mutase 1 activates DNA damage repair via regulation of WIP1 activity. Cell Rep. 31: 107518.

RESEARCH USE

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