SANTA CRUZ BIOTECHNOLOGY, INC.

CDP (B-10): sc-514008

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CDP (for CCAAT displacement protein) has been identified as a repressor for transcription of developmentally regulated genes. It is a homeodomain protein that appears to compete with transcriptional activating proteins for binding to the promoter regions of various genes. CDP contains three cut repeats which function as DNA binding domains. It has been demonstrated that cut repeat domains have the capacity to bind to DNA in conjunction with or independently of homeodomain DNA binding. CDP has been shown to be the DNA-binding subunit of the HiNF-D complex, which contains cyclin A, Cdc2 and an Rb-related protein, in addition to CDP. Histone expression is required for the transition to S phase in the cell cycle. The HiNF-D complex regulates the transcription of Histone H4, H3 and H1 genes, allowing cells to progress from G_1 to S phase.

CHROMOSOMAL LOCATION

Genetic locus: CUX1 (human) mapping to 7q22.1; Cux1 (mouse) mapping to 5 G2.

SOURCE

CDP (B-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1308-1332 at the C-terminus of CDP of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-514008 X, 200 µg/0.1 ml.

CDP (B-10) is available conjugated to agarose (sc-514008 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514008 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-514008 PE), fluorescein (sc-514008 FITC), Alexa Fluor® 488 (sc-514008 AF488) or Alexa Fluor® 647 (sc-514008 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-514008 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

CDP (B-10) is recommended for detection of CDP 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), 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).

Suitable for use as control antibody for CDP siRNA (h): sc-35051, CDP siRNA (m): sc-35052, CDP shRNA Plasmid (h): sc-35051-SH, CDP shRNA Plasmid (m): sc-35052-SH, CDP shRNA (h) Lentiviral Particles: sc-35051-V and CDP shRNA (m) Lentiviral Particles: sc-35052-V.

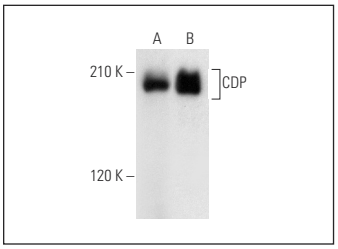
CDP (B-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of CDP: 180 kDa.

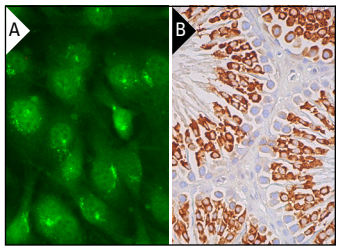
STORAGE

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

DATA



CDP (B-10): sc-514008. Western blot analysis of CDP expression in BJAB (**A**) and K-562 (**B**) nuclear extracts.



CDP (B-10): sc-514008. Immunofluorescence staining of formalin-fixed NIH/3T3 cells showing Golgi apparatus, nuclear and cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat testis tissue showing cytoplasmic staining of cells in seminiferous ducts. Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (**B**).

SELECT PRODUCT CITATIONS

1. Arthur, R.K., et al. 2017. The haploinsufficient tumor suppressor, CUX1, acts as an analog transcriptional regulator that controls target genes through distal enhancers that loop to target promoters. Nucleic Acids Res. 45: 6350-6361.
2. Oboti, L., et al. 2018. Amygdala corticofugal input shapes mitral cell responses in the accessory olfactory bulb. eNeuro 5: ENEURO.0175-18.2018.
3. Li, H., et al. 2019. Therapeutic targeting of circ-CUX1/EWSR1/MAZ axis inhibits glycolysis and neuroblastoma progression. EMBO Mol. Med. 11: e10835.
4. Goz, R.U., et al. 2020. BRAFV600E expression in neural progenitors results in a hyperexcitable phenotype in neocortical pyramidal neurons. J. Neurophysiol. 123: 2449-2464.
5. Limoni, G., et al. 2021. PlexinA4-semaphorin3A-mediated crosstalk between main cortical interneuron classes is required for superficial interneuron lamination. Cell Rep. 34: 108644.
6. Schörnig, M., et al. 2021. Comparison of induced neurons reveals slower structural and functional maturation in humans than in apes. Elife 10: e59323.
7. Yu, M., et al. 2021. Cranial suture regeneration mitigates skull and neurocognitive defects in craniosynostosis. Cell 184: 243-256.e18.

RESEARCH USE

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