SANTA CRUZ BIOTECHNOLOGY, INC.

CBX6 (H-1): sc-393040

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The Power to Question

BACKGROUND

Polycomb group (PcG) proteins form multiprotein complexes that regulate expression patterns of developmental and cell proliferation genes. CBX6 (chromobox protein homolog 6) is a 412 amino acid protein that is a component of the chromatin-associated PcG complex. Through interaction with PcG, CBX6 modifies chromatin and maintains the transcriptionally repressive state of genes. Members of the chromobox domain protein family are characterized by the presence of a 37 amino acid chromobox (CHRromatin organization MOdifier) domain. This domain plays a mechanistic role in targeting chromodomain proteins to specific regions of the nucleus.

REFERENCES

1. Pearce, J.J., et al. 1992. The mouse has a Polycomb-like chromobox gene. Development 114: 921-929.
2. Yamaguchi, K., et al. 1998. Chicken chromobox proteins: cDNA cloning of CHCB1, -2, -3 and their relation to W-heterochromatin. Exp. Cell Res. 242: 303-314.
3. Shao, Z., et al. 1999. Stabilization of chromatin structure by PRC1, a Polycomb complex. Cell 98: 37-46.
4. Müller, J., et al. 2002. Histone methyltransferase activity of a *Drosophila* Polycomb group repressor complex. Cell 111: 197-208.

CHROMOSOMAL LOCATION

Genetic locus: CBX6 (human) mapping to 22q13.1; Cbx6 (mouse) mapping to 15 E1.

SOURCE

CBX6 (H-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 342-369 near the C-terminus of CBX6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-393040 X, 200 µg/0.1 ml.

CBX6 (H-1) is available conjugated to agarose (sc-393040 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393040 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393040 PE), fluorescein (sc-393040 FITC), Alexa Fluor® 488 (sc-393040 AF488), Alexa Fluor® 546 (sc-393040 AF546), Alexa Fluor® 594 (sc-393040 AF594) or Alexa Fluor® 647 (sc-393040 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393040 AF680) or Alexa Fluor® 790 (sc-393040 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393040 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

CBX6 (H-1) is recommended for detection of CBX6 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).

CBX6 (H-1) is also recommended for detection of CBX6 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for CBX6 siRNA (h): sc-72815, CBX6 siRNA (m): sc-142038, CBX6 shRNA Plasmid (h): sc-72815-SH, CBX6 shRNA Plasmid (m): sc-142038-SH, CBX6 shRNA (h) Lentiviral Particles: sc-72815-V and CBX6 shRNA (m) Lentiviral Particles: sc-142038-V.

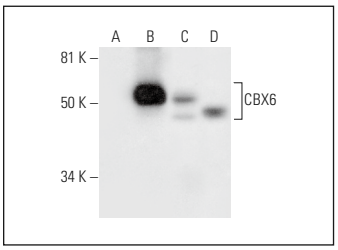
CBX6 (H-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of CBX6: 44 kDa.

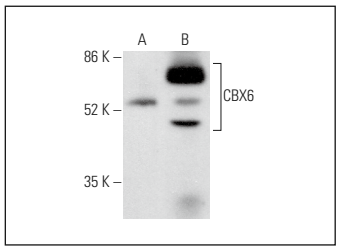
Molecular Weight (observed) of CBX6: 55 kDa.

Positive Controls: CBX6 (m): 293T Lysate: sc-119053, NIH/3T3 nuclear extract: sc-2138 or 3611-RF nuclear extract: sc-2143.

DATA



CBX6 (H-1): sc-393040. Western blot analysis of CBX6 expression in non-transfected: sc-117752 (**A**) and mouse CBX6 transfected: sc-119053 (**B**) 293T whole cell lysates and NIH/3T3 (**C**) and 3611-RF (**D**) nuclear extracts.



CBX6 (H-1): sc-393040. Western blot analysis of CBX6 expression in NIH/3T3 nuclear extract (**A**) and mouse cerebellum tissue extract (**B**).

SELECT PRODUCT CITATIONS

1. Sakai, K., et al. 2020. Proteasomal degradation of Polycomb-group protein CBX6 confers MMP-2 expression essential for mesothelioma invasion. Sci. Rep. 10: 16678.
2. Suh, J.L., et al. 2022. Reprogramming CBX8-PRC1 function with a positive allosteric modulator. Cell Chem. Biol. 29: 555-571.e11.
3. Wang, H., et al. 2024. The E3 ubiquitin ligase RNF220 maintains hindbrain Hox expression patterns through regulation of WDR5 stability. Elife 13: RP94657.

STORAGE

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