

CBX7 (G-3): sc-376274

BACKGROUND

CBX7 (chromobox protein homolog 7) is a 251 amino acid nuclear protein that contains one N-terminal chromo domain and one C-terminal Pc box. Highly expressed in kidney, brain, heart and skeletal muscle, with weaker expression in peripheral blood leukocytes, CBX7 functions as a component of the chromatin-associated polycomb complex (PcG) and is involved in maintaining the transcriptionally repressed state of target genes. Additionally, CBX7 modifies chromatin and is thought to extend the cellular life span of epithelial cells by repressing p14 ARF expression, while simultaneously repressing telomerase activity. Due to its ability to repress the transcription of cell-cycle related proteins, CBX7 is thought to play a role in tumorigenesis, specifically in the development of follicular lymphoma and thyroid cancer.

CHROMOSOMAL LOCATION

Genetic locus: CBX7 (human) mapping to 22q13.1; Cbx7 (mouse) mapping to 15 E1.

SOURCE

CBX7 (G-3) is a mouse monoclonal antibody raised against amino acids 74-158 mapping at the C-terminus of CBX7 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-376274 X, 200 µg/0.1 ml.

CBX7 (G-3) is available conjugated to agarose (sc-376274 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376274 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376274 PE), fluorescein (sc-376274 FITC), Alexa Fluor® 488 (sc-376274 AF488), Alexa Fluor® 546 (sc-376274 AF546), Alexa Fluor® 594 (sc-376274 AF594) or Alexa Fluor® 647 (sc-376274 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376274 AF680) or Alexa Fluor® 790 (sc-376274 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CBX7 (G-3) is recommended for detection of CBX7 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).

Suitable for use as control antibody for CBX7 siRNA (h): sc-72816, CBX7 siRNA (m): sc-72817, CBX7 shRNA Plasmid (h): sc-72816-SH, CBX7 shRNA Plasmid (m): sc-72817-SH, CBX7 shRNA (h) Lentiviral Particles: sc-72816-V and CBX7 shRNA (m) Lentiviral Particles: sc-72817-V.

CBX7 (G-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

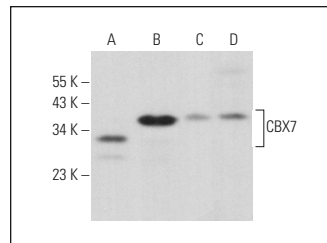
Molecular Weight of CBX7: 28 kDa.

Positive Controls: CBX7 (m): 293T Lysate: sc-119054, U266 whole cell lysate: sc-364800 or Neuro-2A whole cell lysate: sc-364185.

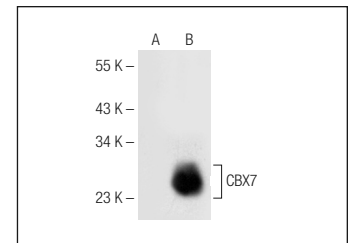
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



CBX7 (G-3): sc-376274. Western blot analysis of CBX7 expression in Neuro-2A (A), U266 (B) and Jurkat (C) whole cell lysates and human artery tissue extract (D).



CBX7 (G-3): sc-376274. Western blot analysis of CBX7 expression in non-transfected: sc-117752 (A) and mouse CBX7 transfected: sc-119054 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Ning, B., et al. 2017. USP26 functions as a negative regulator of cellular reprogramming by stabilising PRC1 complex components. *Nat. Commun.* 8: 349.
- Rosenberg, M., et al. 2017. Denaturing CLIP, dCLIP, pipeline identifies discrete RNA footprints on chromatin-associated proteins and reveals that CBX7 targets 3' UTRs to regulate mRNA expression. *Cell Syst.* 5: 368-385.e15.
- Yongyu, Z., et al. 2018. MicroRNA-18a targets IRF2 and CBX7 to promote cell proliferation in hepatocellular carcinoma. *Oncol. Res.* 26: 1327-1334.
- Plys, A.J., et al. 2019. Phase separation of Polycomb-repressive complex 1 is governed by a charged disordered region of CBX2. *Genes Dev.* 33: 799-813.

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.

PROTOCOLS

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

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