

CBX4 (T-20): sc-19299

BACKGROUND

Polycomb group (PcG) proteins form multiprotein complexes and play a role in gene silencing and Hox gene regulation by altering chromatin structure during transcription. The PcG protein CBX4, also known as, PC2 or NBP16, maps to human chromosome 17q25.3. CBX4 and CBX8 are PcG proteins that show structural similarity to M33 and, like M33, bind the PcG protein RING1 through a conserved c-box motif located in the C-terminus of RING1. CBX4 is a repressor of proto-oncogene activity, thus interference with CBX4 function can lead to depression of proto-oncogene transcription and subsequently to cellular transformation. CBX4 is able to act as a long range transcriptional silencer. CBX4 is expressed in the human osteosarcoma cell line U-20S. CBX4 is part of a large multiprotein complex that also contains other PcG proteins including Bmi-1.

REFERENCES

1. Satiijn, D., et al. 1997. Interference with the expression of a novel human polycomb protein, hPc2, results in cellular transformation and apoptosis. *Mol. Cell. Biol.* 17: 6076-6086.
2. Alkema, M., et al. 1997. MPC2, a new murine homolog of the *Drosophila* polycomb protein is a member of the mouse polycomb transcriptional repressor complex. *J. Mol. Biol.* 273: 993-1003.
3. Garcia, E., et al. 1999. RYBP, a new repressor protein that interacts with components of the mammalian Polycomb complex, and with the transcription factor YY1. *EMBO J.* 18: 3404-3418.

CHROMOSOMAL LOCATION

Genetic locus: CBX4 (human) mapping to 17q25.3; Cbx4 (mouse) mapping to 11 E2.

SOURCE

CBX4 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CBX4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19299 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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 or our catalog for detailed protocols and support products.

APPLICATIONS

CBX4 (T-20) is recommended for detection of CBX4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

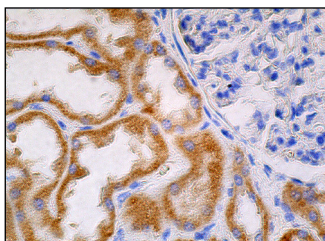
CBX4 (T-20) is also recommended for detection of CBX4 in additional species, including bovine and porcine.

Suitable for use as control antibody for CBX4 siRNA (h): sc-38193, CBX4 siRNA (m): sc-38194, CBX4 shRNA Plasmid (h): sc-38193-SH, CBX4 shRNA Plasmid (m): sc-38194-SH, CBX4 shRNA (h) Lentiviral Particles: sc-38193-V and CBX4 shRNA (m) Lentiviral Particles: sc-38194-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



MPC2 (T-20): sc-19299. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Kuppaswamy, M., et al. 2008. Role of the PLDLS-binding cleft region of CtBP1 in recruitment of core and auxiliary components of the corepressor complex. *Mol Cell Biol.* 28: 269-281.
2. Doller, A. 2008. Posttranslational modification of the AU-rich element binding protein HuR by protein kinase C δ elicits angiotensin II-induced stabilization and nuclear export of cyclooxygenase 2 mRNA. *Mol Cell Biol.* 28: 2608-2625.
3. Xu, B., et al. 2015. Effect of perfluorooctane sulfonate on pluripotency and differentiation factors in mouse embryoid bodies. *Toxicology.* 328: 160-167.