

# CBX4 (J-25): sc-130822

## 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. Satijin, D., Olson, D., van der Vlag, J., Hamer, K., Lambrechts, C., Masselink, H., Gunster, M., Sewalt, R., van Driel, R. and Otte, A. 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., Jacobs, J., Voncken, J., Jenkins, N., Copeland, N., Satijin, D., Otte, A., Berns, A. and van Lohuzen, M. 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., Marcos-Gutierrez, C., del Mar Lorente, M., Moreno, J.C. and Vidal, M. 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.
4. Bel-Vialar, S., Core, N., Terranova, R., Goudot, V., Boned, A. and Djabali, M. 2000. Altered retinoic acid sensitivity and temporal expression of Hox genes in polycomb-M33-deficient mice. *Dev. Biol.* 224: 238-249.
5. Bardos, J.I., Saurin, A.J., Tissot, C., Duprez, E. and Freemont, P.S. 2000. HPC3 is a new human polycomb orthologue that interacts and associates with RING1 and BMI-1 and has transcriptional repression properties. *J. Biol. Chem.* 275: 28785-2892.
6. Hemenway, C.S., de Erkenez, A.C. and Gould, G.C. 2001. The polycomb protein MPc3 interacts with AF9, an MLL fusion partner in t(9;11)(p22;q23) acute leukemias. *Oncogene* 20: 3798-3805.
7. LocusLink Report (LocusID: 8535). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: CBX4 (human) mapping to 17q25.3.

## SOURCE

CBX4 (J-25) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of MPc2 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

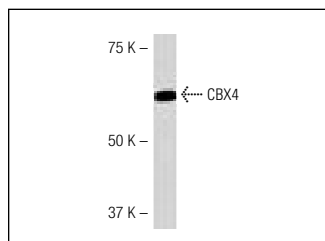
CBX4 (J-25) is recommended for detection of CBX4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



CBX4 (J-25): sc-130822. Western blot analysis of CBX4 expression in Jurkat whole cell lysate.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.