

# CBX6 (S-12): sc-86356

## 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

- Pearce, J.J., Singh, P.B. and Gaunt, S.J. 1992. The mouse has a polycomb-like chromobox gene. *Development* 114: 921-929.
- Yamaguchi, K., Hidema, S. and Mizuno, S. 1998. Chicken chromobox proteins: cDNA cloning of CHCB1, -2, -3 and their relation to W-heterochromatin. *Exp. Cell Res.* 242: 303-314.
- Shao, Z., Raible, F., Mollaaghababa, R., Guyon, J.R., Wu, C.T., Bender, W. and Kingston, R.E. 1999. Stabilization of chromatin structure by PRC1, a polycomb complex. *Cell* 98: 37-46.
- Müller, J., Hart, C.M., Francis, N.J., Vargas, M.L., Sengupta, A., Wild, B., Miller, E.L., O'Connor, M.B., Kingston, R.E. and Simon, J.A. 2002. Histone methyltransferase activity of a *Drosophila* Polycomb group repressor complex. *Cell* 111: 197-208.
- Bernstein, E., Duncan, E.M., Masui, O., Gil, J., Heard, E. and Allis, C.D. 2006. Mouse polycomb proteins bind differentially to methylated Histone H3 and RNA and are enriched in facultative heterochromatin. *Mol. Cell. Biol.* 26: 2560-2569.
- Li, B., Zhou, J., Liu, P., Hu, J., Jin, H., Shimono, Y., Takahashi, M. and Xu, G. 2007. Polycomb protein CBX4 promotes SUMO modification of *de novo* DNA methyltransferase Dnmt3a. *Biochem. J.* 405: 369-378.
- Scott, C.L., Gil, J., Hernando, E., Teruya-Feldstein, J., Narita, M., Martínez, D., Visakorpi, T., Mu, D., Cordon-Cardo, C., Peters, G., Beach, D. and Lowe, S.W. 2007. Role of the chromobox protein CBX7 in lymphomagenesis. *Proc. Natl. Acad. Sci. USA* 104: 5389-5394.
- Ruddock-D'Cruz, N.T., Prashadkumar, S., Wilson, K.J., Heffernan, C., Cooney, M.A., French, A.J., Jans, D.A., Verma, P.J. and Holland, M.K. 2008. Dynamic changes in localization of chromobox (CBX) family members during the maternal to embryonic transition. *Mol. Reprod. Dev.* 75: 477-488.
- Vincenz, C. and Kerppola, T.K. 2008. Different polycomb group CBX family proteins associate with distinct regions of chromatin using nonhomologous protein sequences. *Proc. Natl. Acad. Sci. USA* 105: 16572-16577.

## CHROMOSOMAL LOCATION

Genetic locus: CBX6 (human) mapping to 22q13.1.

## SOURCE

CBX6 (S-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of CBX6 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-86356 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-86356 X, 100 µg/0.1 ml.

## APPLICATIONS

CBX6 (S-12) is recommended for detection of CBX6 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)], 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 CBX6 siRNA (h): sc-72815, CBX6 shRNA Plasmid (h): sc-72815-SH and CBX6 shRNA (h) Lentiviral Particles: sc-72815-V.

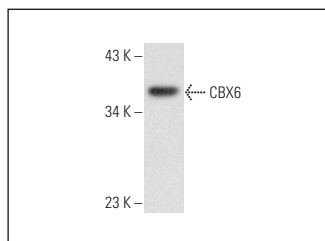
CBX6 (S-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of CBX6: 44 kDa.

Molecular Weight (observed) of CBX6: 55 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat whole cell lysate: sc-2204 or NIH/3T3 nuclear extract: sc-2138.

## DATA



CBX6 (S-12): sc-86356. Western blot analysis of CBX6 expression in HeLa nuclear extract.

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