

MLL5 (N-20): sc-68636

BACKGROUND

The mixed lineage leukemia (MLL) gene family comprise a group of Histone H3 lysine 4 (H3K4) methyltransferases within the larger SET1 family. The founding member MLL commonly undergoes translocations in infantile leukemia and displays increased expression in some adult myeloid leukemias. MLL2, also designated ALR, exists within a complex of proteins. MLL2 is important for mouse embryonic development and may be involved in adhesion-related cytoskeletal events affecting cell growth and survival. The MLL2 gene maps to the human locus 19q13.1, which is a frequent target of rearrangement or amplification in solid tumors. MLL3 or its paralogue MLL4 associate with activating signal cointegrator-2 (ASC-2), which regulates ligand-dependent H3K4 trimethylation and expression of LXR-target genes. MLL3 maps to a location on human chromosome 7 that is often deleted in myeloid disorders. MLL3 also exhibits higher expression in peripheral blood, placenta, pancreas, testis and fetal thymus. MLL5 localizes to the nucleus and forms intranuclear protein complexes, which may regulate chromatin remodeling and cellular growth suppression. The gene encoding human MLL5 lies within chromosome band 7q22.3, a region deleted in cytogenetic aberrations of acute myeloid malignancies.

REFERENCES

- Huntsman, D.G., et al. 1999. MLL2, the second human homolog of the *Drosophila* trithorax gene, maps to 19q13.1 and is amplified in solid tumor cell lines. *Oncogene* 18: 7975-7984.
- Ruault, M., et al. 2002. MLL3, a new human member of the TRX/MLL gene family, maps to 7q36, a chromosome region frequently deleted in myeloid leukaemia. *Gene* 284: 73-81.
- Deng, L.W., et al. 2004. MLL 5 protein forms intranuclear foci, and overexpression inhibits cell cycle progression. *Proc. Natl. Acad. Sci. USA* 101: 757-762.
- Lee, S., et al. 2006. Co-activator as a target gene specificity determinant for Histone H3 lysine 4 methyltransferases. *Proc. Natl. Acad. Sci. USA* 103: 15392-15397.

CHROMOSOMAL LOCATION

Genetic locus: MLL5 (human) mapping to 7q22.3; Mll5 (mouse) mapping to 5 A3.

SOURCE

MLL5 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MLL5 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-68636 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-68636 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MLL5 (N-20) is recommended for detection of MLL5 of mouse, rat and 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).

MLL5 (N-20) is also recommended for detection of MLL5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MLL5 siRNA (h): sc-75798, MLL5 shRNA Plasmid (h): sc-75798-SH and MLL5 shRNA (h) Lentiviral Particles: sc-75798-V.

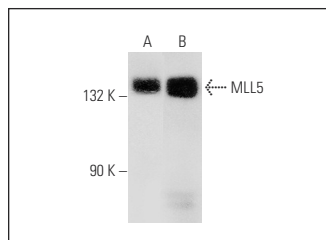
MLL5 (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of MLL5 isoforms 1/2/3/4: 205/196/69/99 kDa.

Molecular Weight of MLL5 isoforms 5/6/7: 186/181/201 kDa.

Positive Controls: mouse cerebellum extract: sc-2403 or mouse brain extract: sc-2253.

DATA



MLL5 (N-20): sc-68636. Western blot analysis of MLL5 expression in mouse cerebellum (A) and mouse brain (B) tissue extracts.

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.



Try **MLL5 (C-10): sc-377182**, our highly recommended monoclonal alternative to MLL5 (N-20).