SANTA CRUZ BIOTECHNOLOGY, INC.

MLLT11 (N-12): sc-104999

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The Power to Question

BACKGROUND

The gene encoding the mixed-lineage leukemia (MLL) proteins is located on chromosome 11q23. Chromosomal translocations involving band 11q23 result in rogue activator proteins that are associated with approximately 10% of patients with acute lymphoblastic leukemia (ALL) and 5% of patients with acute myeloid leukemia (AML). Most patients affected are less than one year of age. MLLT11, also known as mixed-lineage leukemia translocated to 11 or AF1q, is a 90 amino acid MLL fusion partner. Based on the expression patterns of MLLT11, it is thought that MLLT11 plays a role in leukemogenesis and, specifically, the progression of acute monocytic leukemia (AML). Also, expressed in embryonic brain cortex, MLLT11 is upregulated during neuronal differentiation and is thought to play a role in the development of the central nervous system. Finally, MLLT11 has been shown to be differentially expressed in highly metastatic cells, in comparison with non-metastatic parent cells. Such findings suggest a role of MLLT11 in tumorigenesis.

REFERENCES

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3. So, C.W., et al. 2000. Analysis of MLL-derived transcripts in infant acute monocytic leukemia with a complex translocation (1;11;4)(q21;q23;p16). Cancer Genet. Cytogenet. 117: 24-27.
4. Tse, W., et al. 2004. Elevated expression of the AF1q gene, an MLL fusion partner, is an independent adverse prognostic factor in pediatric acute myeloid leukemia. Blood 104: 3058-3063.
5. Lin, H.J., et al. 2004. AF1q, a differentially expressed gene during neuronal differentiation, transforms HEK cells into neuron-like cells. Brain Res. Mol. Brain Res. 131: 126-130.
6. Tse, W., et al. 2005. Increased AF1q gene expression in high-risk myelodysplastic syndrome. Br. J. Haematol. 128: 218-220.
7. Skotheim, R.I., et al. 2006. Novel genomic aberrations in testicular germ cell tumors by array-CGH, and associated gene expression changes. Cell. Oncol. 28: 315-326.
8. Choi, W.T., et al. 2007. C/EBP β suppression by interruption of CUGBP1 resulting from a complex rearrangement of MLL. Cancer Genet. Cytogenet. 177: 108-114.
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CHROMOSOMAL LOCATION

Genetic locus: MLLT11 (human) mapping to 1q21.2; Mllt11 (mouse) mapping to 3 F2.1.

RESEARCH USE

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

SOURCE

MLLT11 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of MLLT11 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-104999 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MLLT11 (N-12) is recommended for detection of MLLT11 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with family member MLLT6.

Suitable for use as control antibody for MLLT11 siRNA (h): sc-88150, MLLT11 siRNA (m): sc-149469, MLLT11 shRNA Plasmid (h): sc-88150-SH, MLLT11 shRNA Plasmid (m): sc-149469-SH, MLLT11 shRNA (h) Lentiviral Particles: sc-88150-V and MLLT11 shRNA (m) Lentiviral Particles: sc-149469-V.

Molecular Weight of MLLT11: 10 kDa.

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.

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 or our catalog for detailed protocols and support products.