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AML1 / RUNX1 Antibody (clone 3A1)

Mouse Monoclonal Antibody
Catalog # ALS14026

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q01196
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	3A1
Calculated MW	48737
Dilution	IF (10 g/ml), IHC-P (5 g/ml),
Concentration (mg/ml)	0.45 mg/ml

Additional Information

Gene ID	861
Other Names	Runt-related transcription factor 1, Acute myeloid leukemia 1 protein, Core-binding factor subunit alpha-2, CBF-alpha-2, Oncogene AML-1, Polyomavirus enhancer-binding protein 2 alpha B subunit, PEA2-alpha B, PEBP2-alpha B, SL3-3 enhancer factor 1 alpha B subunit, SL3/AKV core-binding factor alpha B subunit, RUNX1, AML1, CBFA2
Target/Specificity	Human RUNX1
Reconstitution & Storage	Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.
Precautions	AML1 / RUNX1 Antibody (clone 3A1) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RUNX1
Synonyms	AML1, CBFA2
Function	Forms the heterodimeric complex core-binding factor (CBF) with CBFB. RUNX members modulate the transcription of their target genes through recognizing the core consensus binding sequence 5'- TGTGGT-3', or very rarely, 5'-TGCGGT-3', within their regulatory regions via their runt domain, while CBFB is a non-DNA-binding regulatory subunit that allosterically enhances the sequence-specific DNA-binding capacity of RUNX. The heterodimers bind to the core site of a number of enhancers and promoters, including murine leukemia virus, polyomavirus enhancer, T-cell receptor

	enhancers, LCK, IL3 and GM-CSF promoters (Probable). Essential for the development of normal hematopoiesis (PubMed:17431401). Acts synergistically with ELF4 to transactivate the IL-3 promoter and with ELF2 to transactivate the BLK promoter (PubMed:10207087, PubMed:14970218). Inhibits KAT6B-dependent transcriptional activation (By similarity). Involved in lineage commitment of immature T cell precursors. CBF complexes repress ZBTB7B transcription factor during cytotoxic (CD8+) T cell development. They bind to RUNX-binding sequence within the ZBTB7B locus acting as transcriptional silencer and allowing for cytotoxic T cell differentiation. CBF complexes binding to the transcriptional silencer is essential for recruitment of nuclear protein complexes that catalyze epigenetic modifications to establish epigenetic ZBTB7B silencing (By similarity). Controls the anergy and suppressive function of regulatory T-cells (Treg) by associating with FOXP3. Activates the expression of IL2 and IFNG and down-regulates the expression of TNFRSF18, IL2RA and CTLA4, in conventional T-cells (PubMed:17377532). Positively regulates the expression of RORC in T-helper 17 cells (By similarity).
Cellular Location	Nucleus.
Tissue Location	Expressed in all tissues examined except brain and heart. Highest levels in thymus, bone marrow and peripheral blood
Volume	Array

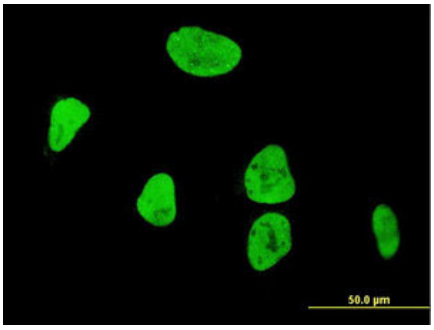
Background

CBF binds to the core site, 5'-PYGPYGGT-3', of a number of enhancers and promoters, including murine leukemia virus, polyomavirus enhancer, T-cell receptor enhancers, LCK, IL-3 and GM-CSF promoters. The alpha subunit binds DNA and appears to have a role in the development of normal hematopoiesis. Isoform AML-1L interferes with the transactivation activity of RUNX1. Acts synergistically with ELF4 to transactivate the IL-3 promoter and with ELF2 to transactivate the mouse BLK promoter. Inhibits KAT6B- dependent transcriptional activation.

References

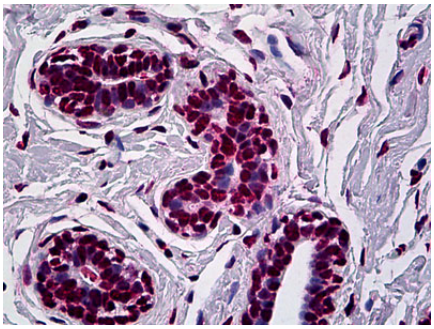
Ahn M.-Y.,et al.Submitted (SEP-1994) to the EMBL/GenBank/DDBJ databases.
Miyoshi H.,et al.Proc. Natl. Acad. Sci. U.S.A. 88:10431-10434(1991).
Sacchi N.,et al.Genes Chromosomes Cancer 11:226-236(1994).
Nucifora G.,et al.Blood 81:2728-2734(1993).
Levanon D.,et al.Genomics 23:425-432(1994).

Images



Immunofluorescence of monoclonal antibody to RUNX1 on HeLa cell. [antibody concentration 10 ug/ml].

Anti-RUNX1 antibody IHC of human breast.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.