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RUNX1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1523a

Product Information

Application	WB, ICC, E
Primary Accession	Q01196
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5A1
Isotype	IgG1
Calculated MW	48737
Description	Core binding factor (CBF) is a heterodimeric transcription factor that binds to the core element of many enhancers and promoters. The protein encoded by this gene represents the alpha subunit of CBF and is thought to be involved in the development of normal hematopoiesis. Chromosomal translocations involving this gene are well-documented and have been associated with several types of leukemia. Three transcript variants encoding different isoforms have been found for this gene. (provided by RefSeq) Tissue specificity: Expressed in all tissues examined except brain and heart. Highest levels in thymus, bone marrow and peripheral blood.
Immunogen	Synthesized peptide of human RUNX1.
Formulation	Ascitic fluid containing 0.03% sodium azide.

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
Dilution	WB~~1/500 - 1/2000 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RUNX1 Antibody 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

References

1. J Cell Physiol. 2009 Feb;218(2):343-9. 2. J Radiat Res (Tokyo). 2008 Sep;49(5):549-55.

Images

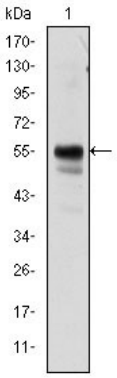
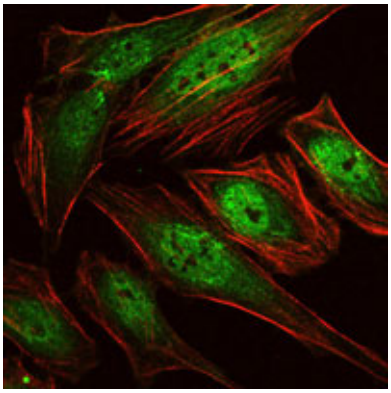


Figure 1: Western blot analysis using RUNX1 mouse mAb against Jurkat cell lysate.

Figure 2: Immunofluorescence analysis of Hela cells using RUNX1 mouse mAb (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



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