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Mouse Runx1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21302b

Product Information

Application	WB, E
Primary Accession	Q03347
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB52364
Calculated MW	48610

Additional Information

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, Pebp2ab
Target/Specificity	This Mouse Runx1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 426-459 amino acids from the C-terminal region of Mouse Runx1.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Runx1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Runx1
Synonyms	Aml1, Cbfa2, Pebp2ab
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. Acts synergistically with ELF4 to transactivate the IL-3 promoter and with ELF2 to transactivate the BLK promoter. 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 (PubMed:18258917). CBF complexes binding to the transcriptional silencer is essential for recruitment of nuclear protein complexes that catalyze epigenetic modifications to establish epigenetic ZBTB7B silencing (PubMed:23481257). 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 (PubMed:21151104).

Cellular Location Nucleus.

Tissue Location Isoform 4 is expressed at high levels in thymus, spleen and T-cell lines and at lower levels in myeloid cell lines and nonhematopoietic cells. Isoform 5 is expressed ubiquitously in lumbar vertebrae, brain, kidney, heart, muscle, ovary and osteoblast-like cell line MC3T3-E1

Background

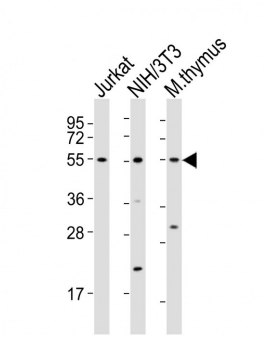
CBF binds to the core site, 5'-PYGPYGGT-3', of a number of enhancers and promoters, including murine leukemia virus, polyomavirus enhancer, T-cell receptor enhancers, LCK, IL-3 and GM-CSF promoters. Essential for the development of normal hematopoiesis. Isoform 4 shows higher binding activities for target genes and binds TCR-beta-E2 and RAG-1 target site with threefold higher affinity than other isoforms. It is less effective in the context of neutrophil terminal differentiation. Acts synergistically with ELF4 to transactivate the IL-3 promoter and with ELF2 to transactivate the BLK promoter. Inhibits KAT6B- dependent transcriptional activation (By similarity).

References

Bae S.-C.,et al.Oncogene 8:809-814(1993).
Bae S.-C.,et al.Mol. Cell. Biol. 14:3242-3252(1994).
Calabi F.,et al.Submitted (APR-1996) to the EMBL/GenBank/DDBJ databases.
Tsuji K.,et al.Biochem. Biophys. Res. Commun. 274:171-176(2000).
Fujita Y.,et al.Biochem. Biophys. Res. Commun. 281:1248-1255(2001).

Images

All lanes : Anti-Runx1 Antibody (C-term) at 1:2000 dilution
Lane 1: Jurkat whole cell lysates Lane 2: NIH/3T3 whole cell lysates Lane 3: mouse thymus lysates
Lysates/proteins at 20 µg per lane. Secondary Goat



Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 49 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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