10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RUNX1 Antibody (S276)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2805a

Product Information

Application	WB, IHC-P, IF, FC, E
Primary Accession	Q01196
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	48737
Antigen Region	227-255

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	This RUNX1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 227-255 amino acids from human RUNX1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 FC~~1:10~50 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	RUNX1 Antibody (S276) 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

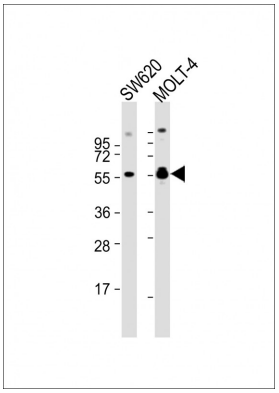
Background

Core binding factor (CBF) is a heterodimeric transcription factor that binds to the core element of many enhancers and promoters. The RUNX1 protein represents the alpha subunit of CBF and is thought to be involved in the development of normal hematopoiesis.

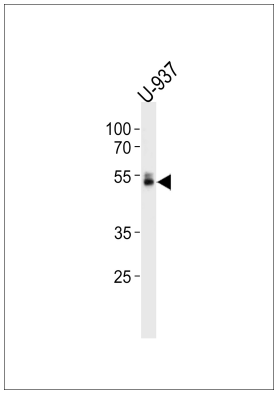
References

Moosavi,S.A., Cancer Genet. Cytogenet. 189 (1), 24-28 (2009)
Zen,P.R., Cancer Genet. Cytogenet. 188 (2), 112-117 (2009)

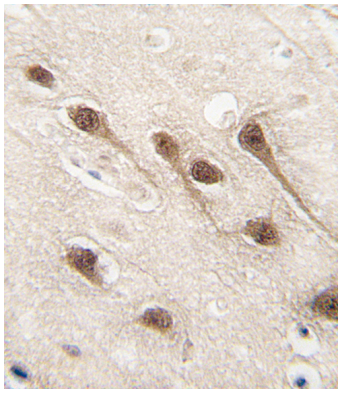
Images



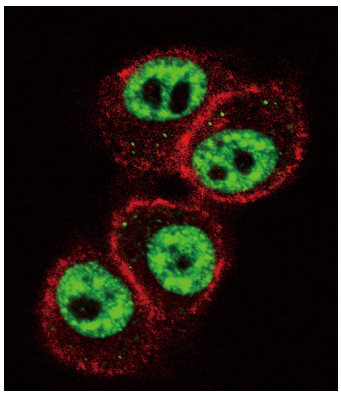
All lanes : Anti-RUNX1 Antibody (S276) at 1:2000 dilution Lane 1: SW620 whole cell lysate Lane 2: MOLT-4 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 49 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



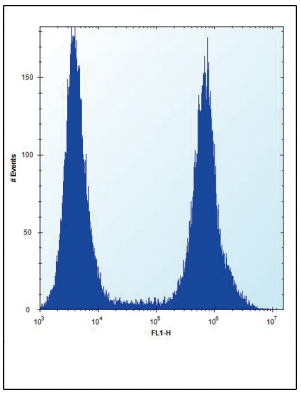
RUNX1 Antibody (S276) (Cat. #AP2805a) western blot analysis in U-937 cell line lysates (35ug/lane).This demonstrates the RUNX1 antibody detected the RUNX1 protein (arrow).



Formalin-fixed and paraffin-embedded human brain tissue reacted with RUNX1 Antibody (S276) (Cat.#AP2805a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of RUNX1 Antibody (S276)(Cat#AP2805a) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).



RUNX1 Antibody (S276) (Cat. #AP2805a) flow cytometric analysis of Hela cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated donkey-anti-rabbit secondary antibodies were used for the analysis.