RUNX1 Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	RUNX1, Monoclonal Antibody
Full Product Name	RUNX1 (Runt-Related Transcription Factor 1, AML1, AML1-EVI-1, AMLCR1, CBFA2, EVI-1, PEBP2aB) (MaxLight 490)
Product Gene Name	anti-RUNX1 antibody
Product Synonym Names	Runt-Related Transcription Factor 1; AML1; AML1-EVI-1; AMLCR1; CBFA2; EVI-1; PEBP2aB
Clonality	Monoclonal
Isotype	IgG2b,k
Clone Number	3A1
Host	Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight490.
Purity/Purification	Purified
Specificity	Recognizes RUNX1.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight490 conjugates are sensitive to light. For maximu recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	48,737 Da
Chromosome Location	Chromosome: 21; NC_000021.8 (36160098..36421595, complement). Location: 21q22.3
OMIM	151385
3D Structure	ModBase 3D Structure for Q01196
Immunogen	RUNX1 (NP_001001890.1, 210aa-310aa) partial recombinant protein with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	RVSPHHPAPTPNPRASLNHSTAFNPQPQSQMQDTRQIQPSPPWSYDQSYQYLGSIASPSVHPATPISPGRASGMTTLSAELSSRLSTAPDLTAFSDPRQ
Conjugate	MaxLight490
Product Categories/Family for anti-RUNX1 antibody	Antibodies; Transcription Factors
Applications Tested/Suitable for anti-RUNX1 antibody	FLISA, Immunofluorescence (IF), Immunohistochemistry (IHC), Western Blot (WB), In situ Proximity Ligation Assay (Cell)
Application Notes for anti-RUNX1 antibody	Applications are based on unconjugated antibody.

Related Product Information for anti-RUNX1 antibody	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]
Other Notes	Small volumes of anti-RUNX1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for RUNX1 purchase	MBS6208396 is an antibody targeting RUNX1. Also known as RUNX1 (Runt-Related Transcription Factor 1, AML1, AML1-EVI-1, AMLCR1, CBFA2, EV 1, PEBP2aB) (MaxLight 490). Host: Mouse.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RUNX1. It may not necessarily be applicable to this product.

NCBI GI #	49574546
NCBI GeneID	861
NCBI Accession #	NP_001001890.1
UniProt Primary Accession #	Q01196
UniProt Secondary Accession #	O60472; O60473; O76047; O76089; Q13081; Q13755; Q13756; Q13757; A8MV94; B2RMS4; D3DSG1
UniProt Related Accession #	Q01196
GenBank Nucleotide #	NM_001001890.2
NCBI Official Full Name	runt-related transcription factor 1 isoform AML1b
NCBI Official Synonym Full Names	runt-related transcription factor 1
NCBI Official Symbol	RUNX1
NCBI Official Synonym Symbols	AML1; CBFA2; EVI-1; AMLCR1; PEBP2aB; AML1-EVI-1
UniProt Protein Name	Runt-related transcription factor 1
UniProt Synonym Protein Names	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
Protein Family	Runt-related transcription factor
UniProt Gene Name	RUNX1
UniProt Synonym Gene Names	AML1; CBFA2; CBF-alpha-2; PEA2-alpha B
UniProt Entry Name	RUNX1_HUMAN
NCBI Protein Information	runt-related transcription factor 1; CBF-alpha-2; PEA2-alpha B; PEBP2-alpha B; oncogene AML-1; AML1-EVI-1 fusion protein; acute myeloid leukemia 1 protein; SL3-3 enhancer factor 1 alpha B subunit; SL3/AKV core-binding factor alpha B subunit; core-binding

UniProt Comments for RUNX1	AML1: 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. Heterodimer with CBFB. RUNX1 binds DNA as a monomer and through the Runt domain. DNA-binding is increased by heterodimerization. Isoform AML-1L can neither bind DNA nor heterodimerize. Interacts with TLE1 and ALYREF/THOC4. Interacts with ELF1, ELF2 and SPI1. Interacts via its Runt domain with the ELF4 N-terminal region. Interaction with ELF2 isoform 2 (NERF-1a) may act to repress RUNX1-mediated transactivation. Interacts with KAT6A and KAT6B. Interacts with SUV39H1, leading to abrogation of transactivating and DNA-binding properties of RUNX1. Interacts with YAP1. Interacts with HIPK2. Interaction with CDK6 prevents myeloid differentiation, reducing its transcription transactivation activity. Expressed in all tissues examined except brain and heart. Highest levels in thymus, bone marrow and peripheral blood. 11 isoforms of the human protein are produced by alternative splicing. Protein type: DNA-binding; Oncoprotein; Transcription factor Chromosomal Location of Human Ortholog: 21q22.3 Cellular Component: nucleoplasm; intracellular membrane-bound organelle; cytoplasm; basement membrane; nucleus Molecular Function: protein binding; protein homodimerization activity; DNA binding; protein heterodimerization activity; calcium ion binding; transcription factor binding; transcription factor activity; ATP binding Biological Process: central nervous system development; hair follicle morphogenesis; transcription, DNA-dependent; embryonic hemopoiesis; in utero embryonic development; positive regulation of transcription, DNA-dependent; positive regulation of granulocyte differentiation; regulation of signal transduction; liver development; negative regulation of granulocyte differentiation; peripheral nervous system neuron development; behavioral response to pain; positive regulation of angiogenesis; myeloid progenitor cell differentiation; positive regulation of interleukin-2 production; positive regulation of transcription from RNA polymerase II promoter; hemopoiesis; myeloid cell differentiation; skeletal development Disease: Platelet Disorder, Familial, With Associated Myeloid Malignancy; Leukemia, Acute Myeloid; Rheumatoid Arthritis
Research Articles on RUNX1	**1.** Minimal residual disease, rather than gene mutations, should be used for future treatment stratifications in CBF-acute myeloid leukemia patients.
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