

Product Name: RUNX2 Rabbit Polyclonal Antibody**Catalog #: APRab17443**

For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat,Other
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,ICC/IF 1:50-1:200,ELISA 1:10000-1:20000
Molecular Weight	56kDa

Antigen Information

Gene Name	RUNX2 RUNX2; AML3; CBFA1; OSF2; PEBP2A; Runt-related transcription factor 2; Acute myeloid leukemia 3 protein; Core-binding factor subunit alpha-1; CBF-alpha-1; Oncogene AML-
Alternative Names	3Osteoblast-specific transcription factor 2; OSF-2; Polyomavirus enhancer-binding protein 2 alpha A subunit; PEA2-alpha A; PEBP2-alpha A; SL3-3 enhancer factor 1 alpha A subunit; SL3/AKV core-binding factor alpha A subunit
Gene ID	860.0
SwissProt ID	Q13950
Immunogen	The antiserum was produced against synthesized peptide derived from the Internal region of

human RUNX2. AA range:201-250

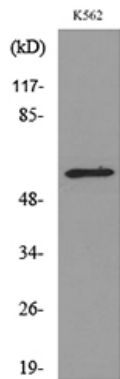
Background

This gene is a member of the RUNX family of transcription factors and encodes a nuclear protein with an Runt DNA-binding domain. This protein is essential for osteoblastic differentiation and skeletal morphogenesis and acts as a scaffold for nucleic acids and regulatory factors involved in skeletal gene expression. The protein can bind DNA both as a monomer or, with more affinity, as a subunit of a heterodimeric complex. Two regions of potential trinucleotide repeat expansions are present in the N-terminal region of the encoded protein, and these and other mutations in this gene have been associated with the bone development disorder cleidocranial dysplasia (CCD). Transcript variants that encode different protein isoforms result from the use of alternate promoters as well as alternate splicing. [provided by RefSeq, Jul 2016],disease:Defects in RUNX2 are the cause of cleidocranial dysplasia (CCD) [MIM:119600]. CCD is an autosomal dominant skeletal disorder with high penetrance and variable expressivity. It is due to defective endochondral and intramembranous bone formation. Typical features include hypoplasia/aplasia of clavicles, patent fontanelles, wormian bones (additional cranial plates caused by abnormal ossification of the calvaria), supernumerary teeth, short stature, and other skeletal changes. In some cases defects in RUNX2 are exclusively associated with dental anomalies.,domain:A proline/serine/threonine rich region at the C-terminus is necessary for transcriptional activation of target genes and contains the phosphorylation sites.,function:Transcription factor involved in osteoblastic differentiation and skeletal morphogenesis. Essential for the maturation of osteoblasts and both intramembranous and endochondral ossification. 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, osteocalcin, osteopontin, bone sialoprotein, alpha 1(I) collagen, LCK, IL-3 and GM-CSF promoters (By similarity). Inhibits MYST4-dependent transcriptional activation.,PTM:Phosphorylated; probably by MAP kinases (MAPK) (By similarity). Isoform 3 is phosphorylated on Ser-340.,similarity:Contains 1 Runt domain.,subunit:Heterodimer of an alpha and a beta subunit. Interacts with HIVP3 (By similarity). The alpha subunit binds DNA as a monomer and through the Runt domain. DNA-binding is increased by heterodimerization. Interacts with G22P1 (Ku70) and XRCC5 (Ku80). Interacts with MYST3 and MYST4.,tissue specificity:Specifically expressed in osteoblasts.,

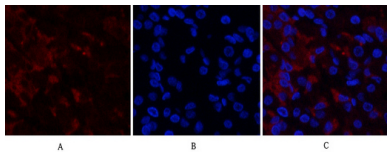
Research Area

Other factors; Epigenetics and Nuclear Signaling; Transcription; Transcription Factors; Stem Cells; Mesenchymal Stem Cells; Osteogenesis; Developmental Biology; Organogenesis; Skeletal development; Bone; Neuroscience; Development

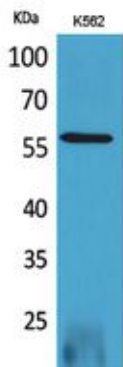
Image Data



Western blot analysis of lysate from K562 cells, using RUNX2 Antibody.



Immunofluorescence analysis of human-stomach tissue. 1, RUNX2 Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



Western Blot analysis of K562 cells using RUNX2 Polyclonal Antibody.. Secondary antibody was diluted at 1:20000