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

## Summary

| | |
|---|---|
| **Production Name** | RUNX2 Rabbit Polyclonal Antibody |
| **Description** | Rabbit Polyclonal Antibody |
| **Host** | Rabbit |
| **Application** | WB,IF,ELISA |
| **Reactivity** | Human,Mouse,Rat,Dog |

## Performance

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|---|---|
| **Conjugation** | Unconjugated |
| **Modification** | Unmodified |
| **Isotype** | IgG |
| **Clonality** | Polyclonal |
| **Form** | Liquid |
| **Storage** | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |
| **Buffer** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N. |
| **Purification** | Affinity purification |

## Immunogen

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|---|---|
| **Gene Name** | RUNX2 |
| **Alternative Names** | 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-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.The antiserum was produced against synthesized peptide derived from the Internal region of human RUNX2. AA range:201-250 |

## Application

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|---|---|
| **Dilution Ratio** | IF 1:50-200 WB 1:500 - 1:2000. ELISA: 1:20000. Not yet tested in other applications. |

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**Molecular Weight** 56kD

## 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 HIVEP3 (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

## Image Data

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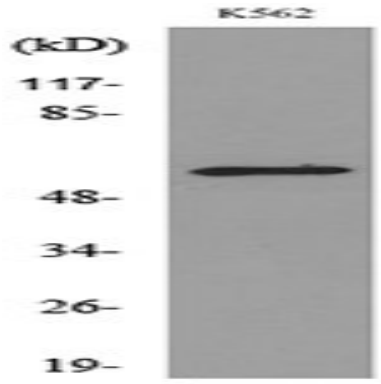
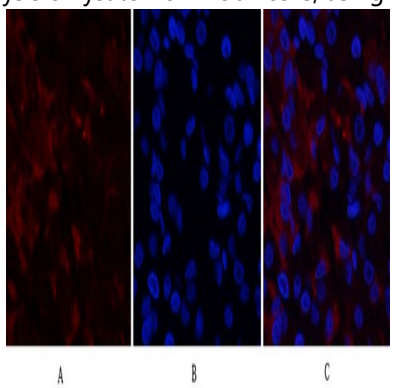
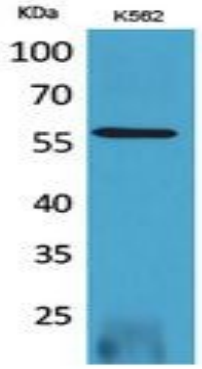



Western blot analysis of lysate from K562 cells, using RUNX2 Antibody.




Immunofluorescence analysis of human-stomach tissue. 1,RUNX2 Polyclonal Antibody（red） was diluted at 1:200（4°C,overnight）. 2, Cy3 labled 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

## Note

For research use only.