RUNX2 Rabbit mAb

Catalog No	YP-rAb-17831
Isotype	IgG
Reactivity	Human,Mouse,Rat,Human,Dog
Applications	WB,IHC,IF,IP,ELISA
Gene Name	RUNX2
Protein Name	Runt-related transcription factor 2
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:1000-1:5000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	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
Observed Band	57kD
Calculated Molecular Weight	57kD
Cell Pathway	Nucleus
Tissue Specificity	Specifically expressed in osteoblasts.
Function	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.,

Background

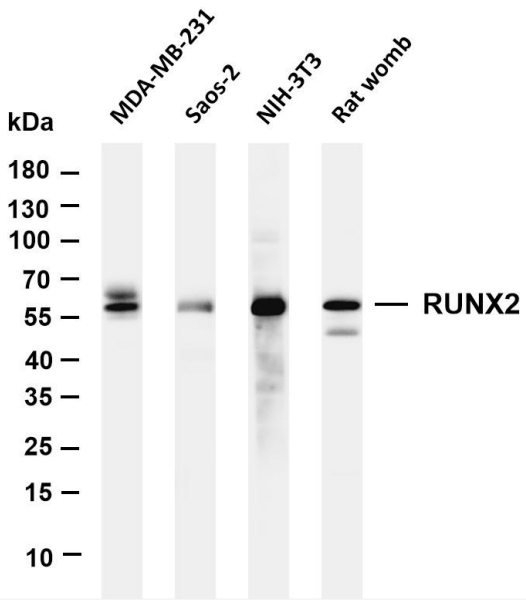
This gene is a member of the RUNX family of transcription factors and encodes a nuclear protein with an Runt DNA-binding domain. This protein is essential for osteoblastic differentiation and skeletal morphogenesis and acts as a scaffold for nucleic acids and regulatory factors involved in skeletal gene 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],

matters needing attention

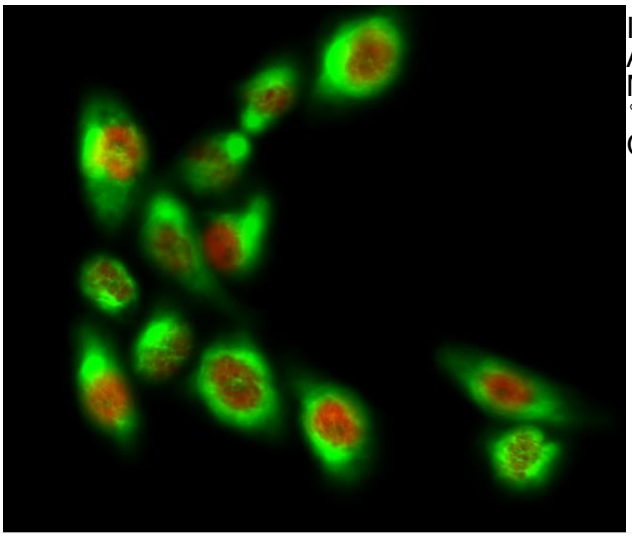
Avoid repeated freezing and thawing!

Usage suggestions

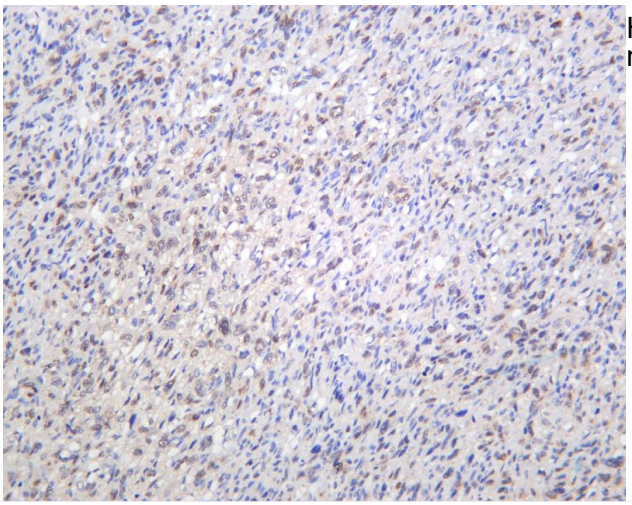
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



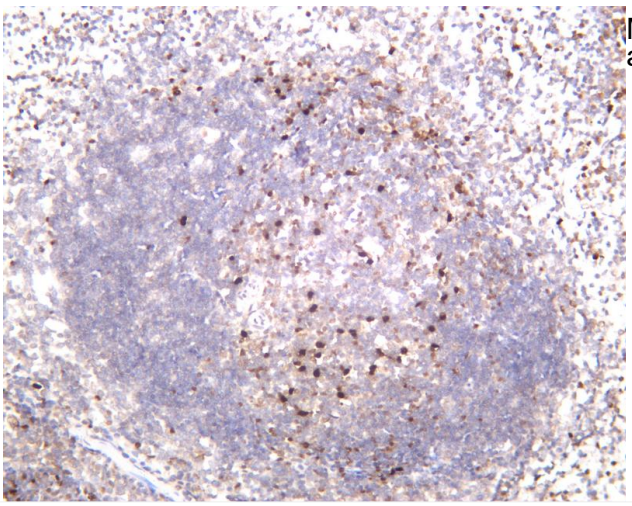
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-RUNX2 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: MDA-MB-231 Lane 2: Saos-2 Lane 3: NIH-3T3 Lane 4: Rat womb Predicted band size: 57kDa Observed band size: 57kDa



Immunofluorescence analysis of Hela cell. 1,RUNX2 Antibody(red) was diluted at 1:200(4° overnight). NSE Monoclonal Antibody(13E2)(green) was diluted at 1:200(4° overnight). 2, Goat Anti Rabbit Alexa Fluor 594 Catalog:



Human osteosarcoma was stained with anti-RUNX2 rabbit antibody



Mouse spleen was stained with anti-RUNX2 rabbit antibody