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

RUNX2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7735a

Product Information

Application	IHC-P, E
Primary Accession	Q13950
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB10543
Calculated MW	56648
Antigen Region	1-30

Additional Information

Gene ID	860
Other Names	Runt-related transcription factor 2, Acute myeloid leukemia 3 protein, Core-binding factor subunit alpha-1, CBF-alpha-1, Oncogene AML-3, Osteoblast-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, RUNX2, AML3, CBFA1, OSF2, PEBP2A
Target/Specificity	This RUNX2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1~30 amino acids from the N-terminal region of human RUNX2.
Dilution	IHC-P~~1:100~500 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	RUNX2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RUNX2

Synonyms	AML3, CBFA1, OSF2, PEBP2A
Function	Transcription factor involved in osteoblastic differentiation and skeletal morphogenesis (PubMed:28505335, PubMed:28703881, PubMed:28738062). 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. In osteoblasts, supports transcription activation: synergizes with SPEN/MINT to enhance FGFR2- mediated activation of the osteocalcin FGF-responsive element (OCFRE) (By similarity). Inhibits KAT6B-dependent transcriptional activation.
Cellular Location	Nucleus. Cytoplasm {ECO:0000250|UniProtKB:Q08775}
Tissue Location	Specifically expressed in osteoblasts.

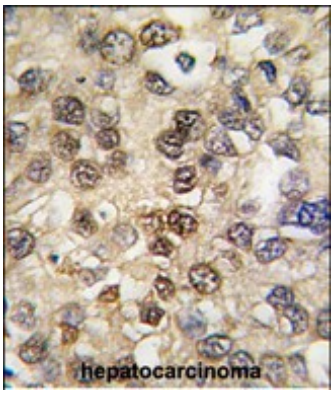
Background

Runx2 is a member of the RUNX family of transcription factors. It is 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. It can bind DNA both as a monomer or, with more affinity, as a subunit of a heterodimeric complex. Mutations in the Runx2 gene have been associated with the bone development disorder cleidocranial dysplasia (CCD).

References

Rich,J.T., Biochem. Biophys. Res. Commun. 372 (1), 230-235 (2008)
Ermakov,S., Ann. Hum. Genet. 72 (PT 4), 510-518 (2008)
Endo,T., J. Clin. Endocrinol. Metab. 93 (6), 2409-2412 (2008)

Images



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with Runx2 Antibody (N-term) (Cat.#AP7735a), 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.

Citations

- CCAAT/enhancer-binding protein β regulates the repression of type II collagen expression during the differentiation from proliferative to hypertrophic chondrocytes.