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Rabbit Anti-RUNX2 antibody

SL20003R

Product Name:	RUNX2
Chinese Name:	核心结合因子α1/成骨特异性转录因子/Cbfα1抗体
Alias:	RUNX2_HUMAN; Runt-related Transcription Factor 2; CBF alpha 1; CBF-alpha-1; PEBP2-alpha A; CBFA1; CCD; CCD1; Cleidocranial dysplasia 1; Core binding factor; Core binding factor runt domain alpha subunit 1; Core binding factor subunit alpha 1; MGC120023; Oncogene AML 3; OSF 2; OSF2; OSF-2; Osteoblast specific transcription factor 2; OTTHUMP00000016533; PEA2 alpha A; PEA2aA; PEBP2 alpha A; PEBP2A1; PEBP2A2; PEBP2aA1; Polyomavirus enhancer binding protein 2 alpha A subunit; Runt domain; Runt related transcription factor 2; SL3 3 enhancer factor 1 alpha A subunit; SL3/AKV core binding factor alpha A subunit; AML3; CLCD.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000Flow-Cyt=1μg/Test not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	57(hu)/67(mo,ratkDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human RUNX2:201-300/521
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	Preservative: 15mM Sodium Azide, Constituents: 1% BSA, 0.01M PBS, pH 7.4
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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. 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 2008].

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. [SUBUNIT] Interaction with SATB2 results in enhanced DNA binding and transactivation by these transcription factors (By similarity). 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 XRCC6 (Ku70) and XRCC5 (Ku80). Interacts with MYST3 and MYST4.

Subunit:
Heterodimer of an alpha and a beta subunit. Interacts with HIVEP3. 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.

Subcellular Location:
Nucleus.

Tissue Specificity:
Specifically expressed in osteoblasts.

Post-translational modifications:
Phosphorylated; probably by MAP kinases (MAPK). Isoform 3 is phosphorylated on Ser340.

DISEASE:
Defects in RUNX2 are the cause of cleidocranial dysplasia (CLCD) [MIM:119600]; also known as cleidocranial dysostosis (CCD). CLCD 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.

Similarity:
Contains 1 Runt domain.

SWISS:
Q13950

Gene ID:
860

Database links:

Entrez Gene: 860Human

Entrez Gene: 12393Mouse

Entrez Gene: 100155806Pig

Entrez Gene: 367218Rat

Omim: 600211Human

SwissProt: Q13950Human

SwissProt: Q9XSB7Horse

SwissProt: Q08775Mouse

SwissProt: Q9Z2J9Rat

Unigene: 535845Human

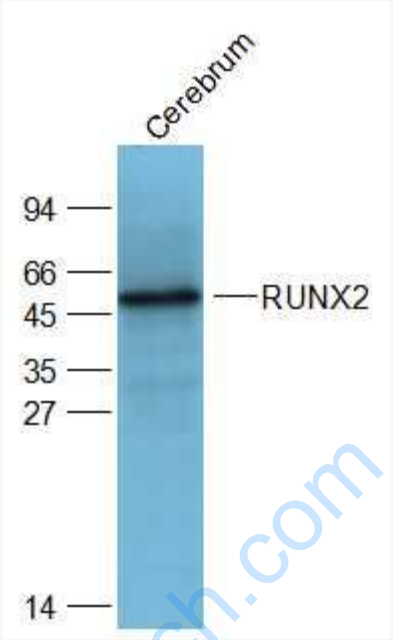
Unigene: 391013Mouse

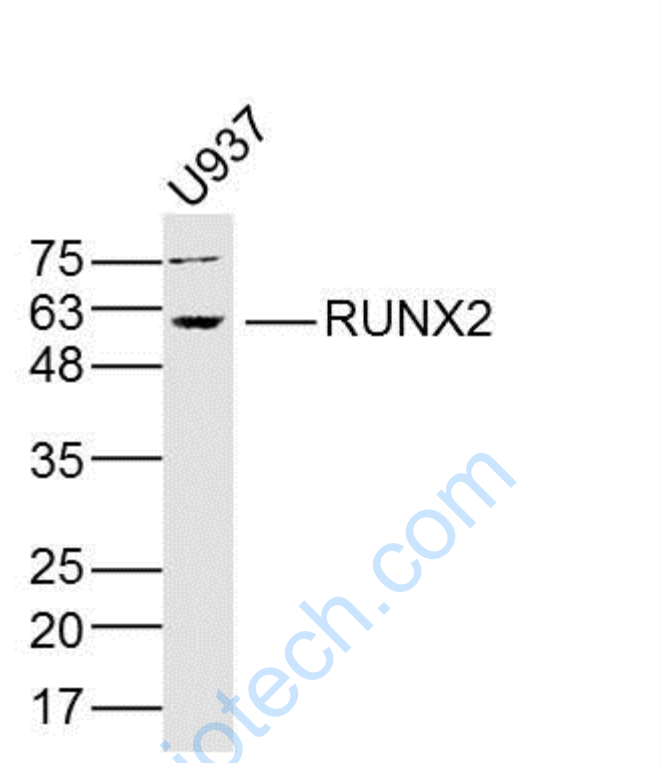
Unigene: 391017Mouse

Unigene: 214214Rat

Unigene: 83672Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:	 Sample: Cerebrum (Mouse) Lysate at 40 ug Primary: Anti-RUNX2 (SL20003R) at 1/2000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 57/67 kD Observed band size: 57 kD



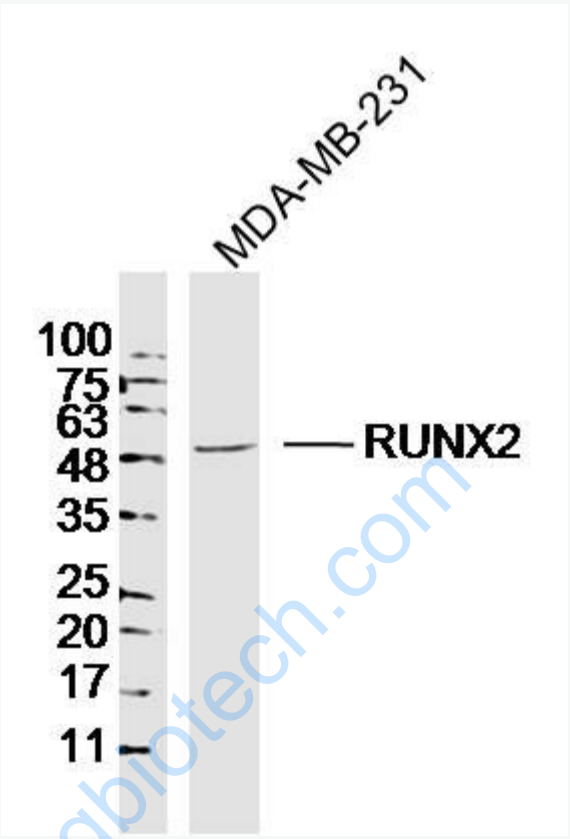
Sample: U937 Cell (Human) Lysate at 40 ug

Primary: Anti-RUNX2 (SL20003R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 57/67 kD

Observed band size: 57 kD



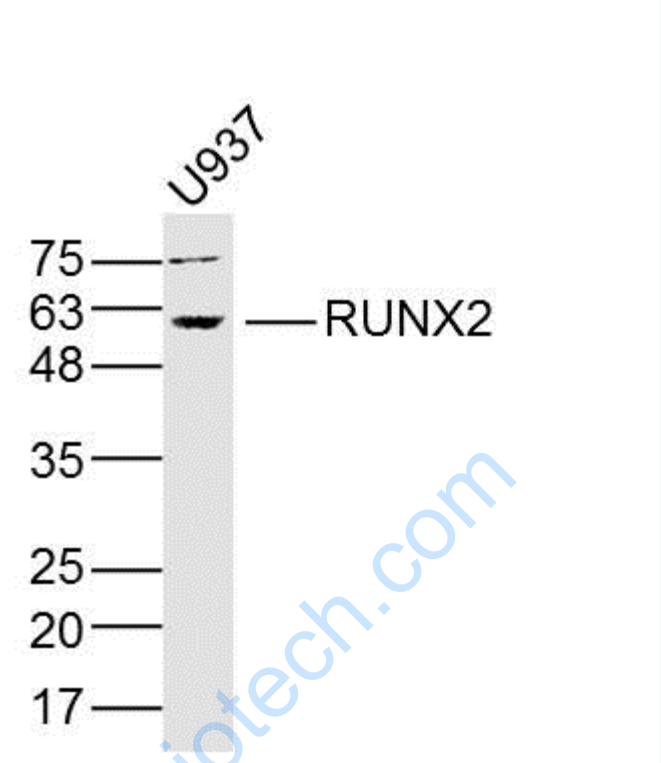
Sample: MDA-MB-231 Cell (Human) Lysate at 40 ug

Primary: Anti-RUNX2 (SL20003R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 57/67 kD

Observed band size: 57 kD



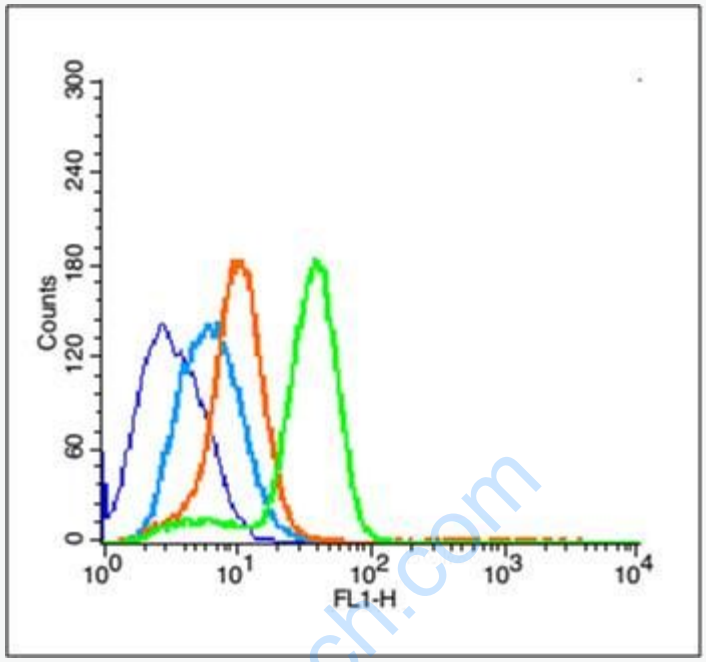
Sample: U937 Cell (Human) Lysate at 40 ug

Primary: Anti-RUNX2 (SL20003R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 57/67 kD

Observed band size: 57 kD



Blank control (blue line): U251 (fixed with 2% paraformaldehyde (10 min)and then permeabilized with 0.1% PBS-Tween for 20 min at room temperature).

Primary Antibody (green line): Rabbit Anti-RUNX2 antibody (SL20003R),Dilution: 1µg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE,Dilution: 1µg /test.