

Rabbit anti-Human, Rat RUNX2 Polyclonal Antibody | anti-RUNX2 antibody

Phospho-RUNX2 (Ser319) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329252	Rabbit	Human, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry

PRODUCT SYNONYMS

RUNX2; Polyclonal Antibody; Phospho-RUNX2 (Ser319) Antibody; Acute myeloid leukemia 3 protein; Alpha subunit 1; AML3; CBF alpha 1; CBF-alpha-1; CBFA1; CCD; CCD1; Cleidocranial dysplasia 1; Core binding factor; Core binding factor runt domain alpha subunit 1; Core binding factor subunit alpha 1; Core-binding factor subunit alpha-1; MGC120022; MGC120023; Oncogene AML 3; Oncogene AML-3; OSF 2; OSF-2; OSF2; Osteoblast specific transcription factor 2; Osteoblast-specific transcription factor 2; OTTHUMP00000016533; PEA2 alpha A; PEA2-alpha A; PEA2aA; PEBP2 alpha A; PEBP2-alpha A; PEBP2A1; PEBP2A2; PEBP2aA; PEBP2aA1; Polyomavirus enhancer binding protein 2 alpha A subunit; Polyomavirus enhancer-binding protein 2 alpha A subunit; Runt domain; Runt related transcription factor 2; Runt-related transcription factor 2; RUNX2_HUMAN; SL3 3 enhancer factor 1 alpha A subunit; SL3-3 enhancer factor 1 alpha A subunit; SL3/AKV core binding factor alpha A subunit; SL3/AKV core-binding factor alpha A subunit; anti-RUNX2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-RUNX2 (Ser319) Antibody detects endogenous levels of RUNX2 only when phosphorylated at Ser319. Tissue Specificity: Specifically expressed in osteoblasts.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-RUNX2 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry)
Immunogen	A synthesized peptide derived from human RUNX2 around the phosphorylation site of Ser319.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylated; probably by MAP kinases (MAPK). Phosphorylation by HIPK3 is required for the SPEN/MINT and FGF2 transactivation during osteoblastic differentiation (By similarity). Phosphorylation at Ser-451 by CDK1 promotes endothelial cell proliferation required for tumor angiogenesis probably by facilitating cell cycle progression. Isoform 3 is phosphorylated on Ser-340.
Subunit Structure	Heterodimer of an alpha and a beta subunit. 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 HIVP3. Interacts with IFI204. Interaction with SATB2; the interaction results in enhanced DNA binding and transactivation by these transcription factors. Binds to HIPK3. Interacts (isoform 3) with DDX5. Interacts with FOXO1 (via a C-terminal region); the interaction inhibits RUNX2 transcriptional activity towards BGLAP. This interaction is prevented on insulin or IGF1 stimulation as FOXO1 is exported from the nucleus (By similarity). Interacts with CCNB1, KAT6A and KAT6B. Interacts with FOXP3. Interacts with TMEM119 (By similarity). Interacts with OLFM2 (By similarity).
Similarity	A proline/serine/threonine rich region at the C-terminus is necessary for transcriptional activation of target genes and contains the phosphorylation sites.

Subcellular Location	Nucleus.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



Application Data

At 25 degree C. Samples were then incubated with primary Ab(At 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI (blue).



IHC (Immunohistochemisry)

At 1/100 staining Human ovarian cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohiostchemistry)

Staining Rat brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/100 staining Human lung cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-RUNX2 antibody	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. 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.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	17368460
NCBI GeneID	860
UniProt Accession #	Q13950; O14614; O14615; O95181
Molecular Weight	507
NCBI Official Full Name	Runt-related transcription factor 2
NCBI Official Synonym Full Names	runt-related transcription factor 2
NCBI Official Symbol	RUNX2
NCBI Official Synonym Symbols	CCD; AML3; CCD1; CLCD; OSF2; CBFA1; OSF-2; PEA2aA; PEBP2aA; CBF-alpha-1
NCBI Protein Information	runt-related transcription factor 2; PEA2-alpha A; PEBP2-alpha A; oncogene AML-3; acute myeloid leukemia 3 protein; SL3-3 enhancer factor 1 alpha A subunit; osteoblast-specific transcription factor 2; SL3/AKV core-binding factor alpha A subunit; core-bind
UniProt Protein Name	Runt-related transcription factor 2
UniProt Gene Name	RUNX2
UniProt Synonym Gene Names	AML3; CBFA1; OSF2; PEBP2A; CBF-alpha-1; OSF-2; PEA2-alpha A; PEBP2-alpha A

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/runx2-antibody-peptide-elisa-immunocytochemistry-immunofluorescence-immunohistochemistry-elisa/329252>