

Product datasheet

Anti-RUNX2 antibody ab135674

[4 References](#) [4 Images](#)

Overview

Product name	Anti-RUNX2 antibody
Description	Rabbit polyclonal to RUNX2
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB, Flow Cyt
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide conjugated to KLH, corresponding to a region within amino acids 512-541 (surrounding S533) of Human RUNX2
Positive control	HepG2 cell line and Hob cell line lysates. NCI-H460 cells IHC-P: FFPE human kidney tissue sections.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.
Storage buffer	Preservative: 0.09% Sodium azide Constituent: 99% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab135674 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Application	Abreviews	Notes
WB		1/50 - 1/100. Predicted molecular weight: 57 kDa.
Flow Cyt		1/10 - 1/50. ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Target

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.

Tissue specificity

Specifically expressed in osteoblasts.

Involvement in 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.

Sequence similarities

Contains 1 Runt domain.

Domain

A proline/serine/threonine rich region at the C-terminus is necessary for transcriptional activation of target genes and contains the phosphorylation sites.

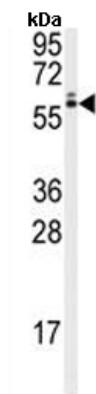
Post-translational modifications

Phosphorylated; probably by MAP kinases (MAPK) (By similarity). Isoform 3 is phosphorylated on Ser-340.

Cellular localization

Nucleus.

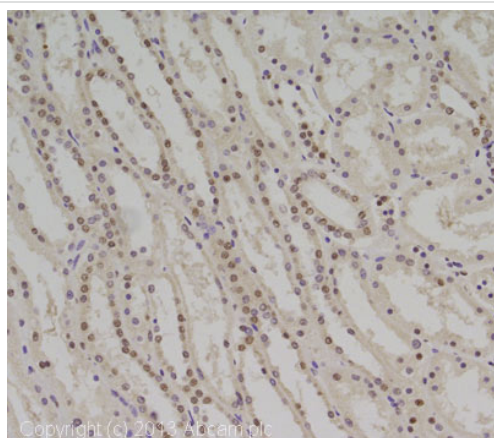
Images



Western blot - Anti-RUNX2 antibody (ab135674)

Anti-RUNX2 antibody (ab135674) at 1/50 dilution + HepG2 cell line lysate at 35 µg

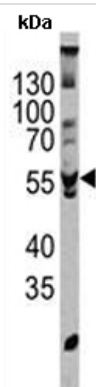
Predicted band size: 57 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RUNX2 antibody (ab135674)

IHC image of RUNX2 staining in human kidney formalin fixed paraffin embedded tissue section, performed on a Leica Bond system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab135674, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

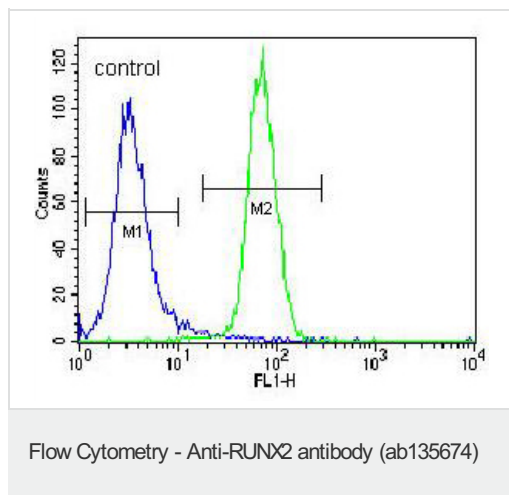
For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Western blot - Anti-RUNX2 antibody (ab135674)

Anti-RUNX2 antibody (ab135674) at 1/50 dilution + Hob cell line lysate

Predicted band size: 57 kDa



Flow cytometric analysis of NCI-H460 cells labelling RUNX2 with ab135674 at 1/10 dilution (green) compared to negative control cells (blue). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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