

## Product datasheet

# Anti-PLAG1 antibody ab87662

1 Image

### Overview

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<b>Product name</b>	Anti-PLAG1 antibody
<b>Description</b>	Rabbit polyclonal to PLAG1
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rat, Rabbit, Horse, Guinea pig, Cat, Dog
<b>Immunogen</b>	Synthetic peptide corresponding to a region within C terminal amino acids 432-481 (YNPLSVGSLG MSYSQEEAHS SVSQLPTQTQ DLQDPANTIG LGSLHSLSAA) of human PLAG1 (NP_002646). <a href="#">Run BLAST with ExPASy</a> <a href="#">Run BLAST with NCBI</a>
<b>Positive control</b>	OVCAR3 cell lysate

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	Preservative: None Constituents: 2% Sucrose, PBS
<b>Purity</b>	Immunogen affinity purified
<b>Purification notes</b>	Purified by peptide affinity chromatography method.
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

### Applications

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Our [Abpromise guarantee](#) covers the use of **ab87662** 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
WB		Use a concentration of 1 µg/ml. Predicted molecular weight: 56 kDa. Good results were obtained when blocked with 5% non-fat dry milk in 0.05% PBS-T.

## Target

### Function

Transcription factor whose activation results in up-regulation of target genes, such as IGFII, leading to uncontrolled cell proliferation: when overexpressed in cultured cells, higher proliferation rate and transformation are observed. Other target genes such as CRLF1, CRABP2, CRIP2, PIGF are strongly induced in cells with PLAG1 induction. Proto-oncogene whose ectopic expression can trigger the development of pleomorphic adenomas of the salivary gland and lipoblastomas. Overexpression is associated with up-regulation of IGFII, is frequently observed in hepatoblastoma, common primary liver tumor in childhood. Cooperates with CFBF-MYH11, a fusion gene important for myeloid leukemia.

### Tissue specificity

Expressed in fetal tissues such as lung, liver and kidney. Not detected or weak detection in normal adult tissues, but highly expressed in salivary gland with benign or malignant pleiomorphic adenomas with or without 8q12 aberrations, with preferential occurrence in benign tumors.

### Involvement in disease

Note=A chromosomal aberration involving PLAG1 is found in salivary gland pleiomorphic adenomas, the most common benign epithelial tumors of the salivary gland. Translocation t(3;8)(p21;q12) with constitutively expressed beta-catenin/CTNNB1. Fusion occurs in the 5'-regulatory regions, leading to promoter swapping between the 2 genes and activation of PLAG1 expression in adenomas. The chimeric transcript is formed by fusion of CTNNB1 exon 1 to PLAG1 exon 3. Reciprocal fusion transcript consisting of PLAG1 exon 1 and CTNNB1 exon 2-16 is also revealed in some adenomas. Translocation t(3;8)(p21;q12) with transcription elongation factor SII/TCEA1. The fusion transcript is composed of 5'-non-coding sequences as well as 63 nucleotides of the coding region of TCEA1 fused to the acceptor splice site of PLAG1 exon 3. The fusion transcript encodes a truncated TCEA1-PLAG1 protein of 90 AA as well as an apparently normal PLAG1 protein. Reciprocal fusion transcript PLAG1-TCEA1 is also present in one adenoma. Translocation t(5;8)(p13;q12) with leukemia inhibitory factor receptor LIFR. This fusion occurred in the 5'-non-coding sequences of both genes, exchanging regulatory control element while preserving the coding sequences. Translocation t(6;8)(p21.3-22;q13) with Coiled-coil-helix-coiled-coil-helix domain-containing protein 7/CHCHD7. Fusion occurs in the 5' regulatory regions, leading to promoter swapping and up-regulation of PLAG1 expression. Ectopic expression of PLAG1 under the control of promoters of distinct translocation partner genes is a general pathogenetic mechanism for pleiomorphic adenomas with 8q aberrations. These fusion genes are likely to be found in adenomas with normal karyotype as this subgroup of tumors also exhibit PLAG1 activation.

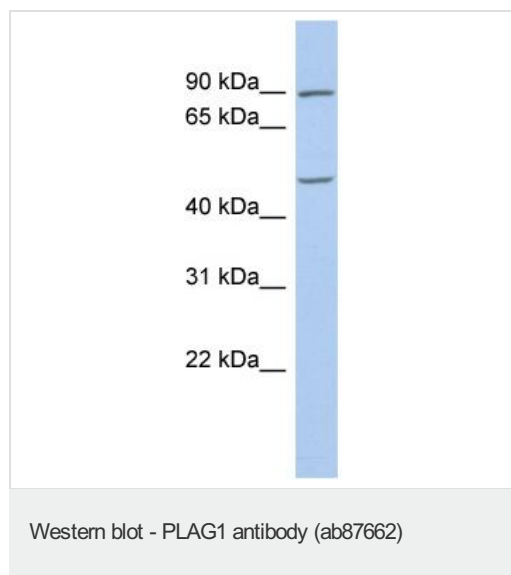
Note=A chromosomal aberration involving PLAG1 may be a cause of lipoblastomas, which are benign tumors resulting from transformation of adipocytes, usually diagnosed in children. 8q12.1 to 8q24.1 intrachromosomal rearrangement with hyaluronic acid synthase 2/HAS2 results in promoter swapping and activation of PLAG1 expression. The breakpoint of HAS2 gene is in PLAG1 intron 1, whereas its coding sequence starts at exon 2 or exon 3. Translocation t(7;8)(p22;q13) with collagen 1A2/COL1A2. Fusion transcript COL1A2-PLAG1 as well as HAS2-PLAG1 encode a full-length PLAG1 protein.

### Sequence similarities

Belongs to the krueppel C2H2-type zinc-finger protein family.  
Contains 7 C2H2-type zinc fingers.

<b>Domain</b>	C2H2-type zinc fingers 3 interacts with DNA-binding site G-clusterinc fingers. C2H2-type zinc fingers 6 and 7 interact with DNA-binding site core sequence.
<b>Post-translational modifications</b>	Sumoylated by SUMO1; which inhibits transcriptional activity, but does not affect nuclear localization. Blockers of sumoylation pathway such as SENP3 and inactive UBE2I increases transcriptional capacity. Sumoylation is increased in the presence of PIAS1. Acetylated by lysine acetyltransferase EP300; which activates transcriptional capacity. Lysine residues that are sumoylated also seem to be target for acetylation.
<b>Cellular localization</b>	Nucleus. Strong nucleolar localization when sumoylation is inhibited.

## Images



Anti-PLAG1 antibody (ab87662) at 1 µg/ml (in 5% skim milk/ PBS buffer ) + OVCAR3 cell lysate at 10 µg

### Secondary

HRP conjugated anti-Rabbit IgG at 1/50000 dilution

**Predicted band size:** 56 kDa

**Observed band size:** 56 kDa

**Additional bands at:** 90 kDa. We are unsure as to the identity of these extra bands.

Gel concentration: 12%

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