

Rabbit LOXL2 Polyclonal Antibody | anti-LOXL2 antibody

LOXL2 Antibody (C-term)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA289086	Rabbit	Human (Predicted Reactivity: Bovine, Chicken, Mouse, Rat)	ELISA, Western Blot

PRODUCT SYNONYMS

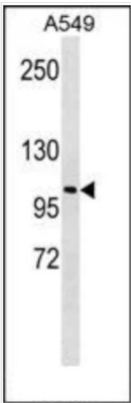
LOXL2; Polyclonal Antibody; LOXL2 Antibody (C-term); Lysyl oxidase homolog 2; Lysyl oxidase-like protein 2; Lysyl oxidase-related protein 2; Lysyl oxidase-related protein WS9-14; anti-LOXL2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human (Predicted Reactivity: Bovine, Chicken, Mouse, Rat)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	This LOXL2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 589-617 amino acids from the C-terminal region of human LOXL2.
Purity/Purification	This antibody is purified through a protein A column, followed by peptide affinity purification.
Form/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.
Sequence Positions	589-617
Sequence Length	774
Applicable Applications for anti-LOXL2 antibody	ELISA, WB (Western Blot)
Function	Mediates the post-translational oxidative deamination of lysine residues on target proteins leading to the formation of deaminated lysine (allysine) (PubMed:27735137). Acts as a transcription corepressor and specifically mediates deamination of trimethylated 'Lys-4' of histone H3 (H3K4me3), a specific tag for epigenetic transcriptional activation (PubMed:27735137). Shows no activity against histone H3 when it is trimethylated on 'Lys-9' (H3K9me3) or 'Lys-27' (H3K27me3) or when 'Lys-4' is monomethylated (H3K4me1) or dimethylated (H3K4me2) (PubMed:27735137). Also mediates deamination of methylated TAF10, a member of the transcription factor IID (TFIID) complex, which induces release of TAF10 from promoters, leading to inhibition of TFIID-dependent transcription (PubMed:25959397). LOXL2-mediated deamination of TAF10 results in transcriptional repression of genes required for embryonic stem cell pluripotency including POU5F1/OCT4, NANOG, KLF4 and SOX2 (By similarity). Involved in epithelial to mesenchymal transition (EMT) via interaction with SNAI1 and participates in repression of E-cadherin CDH1, probably by mediating deamination of histone H3 (PubMed:16096638, PubMed:24414204, PubMed:27735137). During EMT, involved with SNAI1 in negatively regulating pericentromeric heterochromatin transcription (PubMed:24239292). SNAI1 recruits LOXL2 to pericentromeric regions to oxidize histone H3 and repress transcription which leads to release of heterochromatin component CBX5/HP1A, enabling chromatin reorganization and acquisition of mesenchymal traits (PubMed:24239292). Interacts with the endoplasmic reticulum protein HSPA5 which activates the IRE1-XBP1 pathway of the unfolded protein response, leading to expression of several transcription factors involved in EMT and subsequent EMT induction (PubMed:28332555). Involved in E-cadherin repression following hypoxia, a hallmark of EMT believed to amplify tumor aggressiveness, suggesting that it may play a role in tumor progression (PubMed:20026874). When secreted into the extracellular matrix, promotes cross-linking of extracellular matrix proteins by mediating oxidative deamination of peptidyl lysine residues in precursors to fibrous collagen and elastin (PubMed:20306300). Acts as a regulator of sprouting angiogenesis, probably via collagen IV scaffolding (PubMed:21835952). Acts as a regulator of chondrocyte differentiation, probably by regulating expression of factors that control chondrocyte differentiation (By similarity).

Cellular Location	Secreted, extracellular space, extracellular matrix, basement membrane. Nucleus. Chromosome. Endoplasmic reticulum. Note=Associated with chromatin (PubMed:27735137). It is unclear how LOXL2 is nuclear as it contains a signal sequence and has been shown to be secreted (PubMed:23319596) However, a number of reports confirm its intracellular location and its key role in transcription regulation (PubMed:22204712, PubMed:22483618).
Tissue Location	Expressed in many tissues (PubMed:10212285). Highest expression in reproductive tissues, placenta, uterus and prostate (PubMed:10212285). In esophageal epithelium, expressed in the basal, prickle and granular cell layers (PubMed:22204712). Up-regulated in a number of cancers cells and tissues.
Preparation and 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.

IMAGES



WB (Western Blot)
 LOXL2 Antibody (C-term) western blot analysis in A549 cell line lysates (35ug/lane). This demonstrates the LOXL2 antibody detected the LOXL2 protein (arrow).

ADDITIONAL INFORMATION

Related Product Information for anti-LOXL2 antibody	This gene encodes a member of the lysyl oxidase gene family. The prototypic member of the family is essential to the biogenesis of connective tissue, encoding an extracellular copper-dependent amine oxidase that catalyses the first step in the formation of crosslinks in collagens and elastin. A highly conserved amino acid sequence at the C-terminus end appears to be sufficient for amine oxidase activity, suggesting that each family member may retain this function. The N-terminus is poorly conserved and may impart additional roles in developmental regulation, senescence, tumor suppression, cell growth control, and chemotaxis to each member of the family.
Product Categories/Family for anti-LOXL2 antibody	Cancer; Signal Transduction
References	Rodriguez, H.M., et al. J. Biol. Chem. 285(27):20964-20974(2010) Ruckert, F., et al. Int J Colorectal Dis 25(3):303-311(2010) Schietke, R., et al. J. Biol. Chem. 285(9):6658-6669(2010) Sano, M., et al. Int. J. Oncol. 36(2):321-330(2010) Kim, Y., et al. Oncol. Rep. 22(4):799-804(2009)

NCBI AND UNIPROT INFORMATION

NCBI GI #	4505011
NCBI GeneID	4017
NCBI Accession #	NP_002309.1
NCBI GenBank Nucleotide #	NM_002318.2
UniProt Accession #	Q9Y4K0 ; Q53HV3 ; Q9BW70 ; Q9Y5Y8 ; B2R5Q0
Molecular Weight	Calculated MW: 86725

NCBI Official Full Name	lysyl oxidase homolog 2
NCBI Official Synonym Full Names	lysyl oxidase-like 2
NCBI Official Symbol	LOXL2
NCBI Official Synonym Symbols	LOR2; WS9-14
NCBI Protein Information	lysyl oxidase homolog 2
UniProt Protein Name	Lysyl oxidase homolog 2
UniProt Gene Name	LOXL2
UniProt Entry Name	LOXL2_HUMAN

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.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://www.aaabiotech.com/polyclonal/loxl2-antibody-western-blot-elisa/289086>