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LOXL3 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12837b

Product Information

Application	IHC-P, WB, E
Primary Accession	P58215
Other Accession	Q9Z175, NP_115992.1
Reactivity	Human, Mouse
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32569
Calculated MW	83166
Antigen Region	715-744

Additional Information

Gene ID	84695
Other Names	Lysyl oxidase homolog 3, 143-, Lysyl oxidase-like protein 3, LOXL3, LOXL
Target/Specificity	This LOXL3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 715-744 amino acids from the C-terminal region of human LOXL3.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
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.
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.
Precautions	LOXL3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LOXL3 {ECO:0000303|PubMed:11386757, ECO:0000312|HGNC:HGNC:13869}
Function	Protein-lysine 6-oxidase that mediates the oxidation of peptidyl lysine residues to allysine in target proteins (PubMed:17018530, PubMed:28065600).

	Catalyzes the post-translational oxidative deamination of peptidyl lysine residues in precursors of elastin and different types of collagens, a prerequisite in the formation of cross-links between collagens and elastin (PubMed:17018530). Required for somite boundary formation by catalyzing oxidation of fibronectin (FN1), enhancing integrin signaling in myofibers and their adhesion to the myotendinous junction (MTJ) (By similarity). Acts as a regulator of inflammatory response by inhibiting differentiation of naive CD4(+) T-cells into T-helper Th17 or regulatory T-cells (Treg): acts by interacting with STAT3 in the nucleus and catalyzing both deacetylation and oxidation of lysine residues on STAT3, leading to disrupt STAT3 dimerization and inhibit STAT3 transcription activity (PubMed:28065600). Oxidation of lysine residues to allysine on STAT3 preferentially takes place on lysine residues that are acetylated (PubMed:28065600). Also able to catalyze deacetylation of lysine residues on STAT3 (PubMed:28065600).
Cellular Location	Secreted, extracellular space {ECO:0000250|UniProtKB:Q9Z175}. Cytoplasm. Nucleus Note=It is unclear how LOXL3 is both intracellular (cytoplasmic and nuclear) and extracellular: it contains a clear signal sequence and is predicted to localize in the extracellular medium. However, the intracellular location is clearly reported and at least another protein of the family (LOXL2) also has intracellular and extracellular localization despite the presence of a signal sequence (PubMed:28065600). [Isoform 2]: Cytoplasm. Secreted, extracellular space
Tissue Location	Isoform 1: Predominantly detected in the heart, placenta, lung, and small intestine (PubMed:17018530). Isoform 2: Highly detected in the kidney, pancreas, spleen, and thymus, and is absent in lung (PubMed:17018530). In eye, present in all layers of corneas as well as in the limbus and conjunctiva (at protein level) (PubMed:26218558).

Background

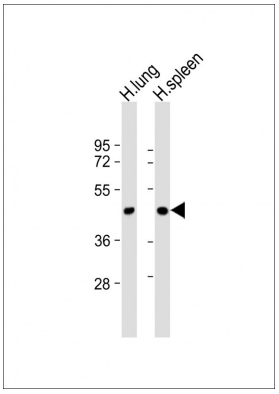
This gene encodes a member of the lysyl oxidase gene family. The prototypic member of the family is essential to the biogenesis of connective tissue, encoding an extracellular copper-dependent amine oxidase that catalyses the first step in the formation of crosslinks in collagens and elastin. A highly 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. Alternatively spliced transcript variants of this gene have been reported but their full-length nature has not been determined.

References

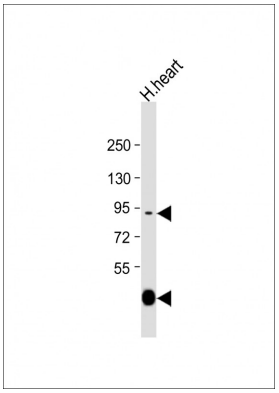
Kim, Y., et al. Oncol. Rep. 22(4):799-804(2009)
Sebban, S., et al. Virchows Arch. 454(1):71-79(2009)
Akagawa, H., et al. Hum. Genet. 121 (3-4), 377-387 (2007) :
Lee, J.E., et al. J. Biol. Chem. 281(49):37282-37290(2006)
Peinado, H., et al. EMBO J. 24(19):3446-3458(2005)

Images

All lanes : Anti-LOXL3 Antibody (C-term) at 1:2000 dilution Lane 1: human lung lysate Lane 2: human spleen lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 83 kDa Blocking/Dilution



buffer: 5% NFDM/TBST.



Anti-LOXL3 Antibody (C-term) at 1:2000 dilution + human heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 83 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

LOXL3 Antibody (C-term) (Cat. #AP12837b)immunohistochemistry analysis in formalin fixed and paraffin embedded human placenta tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of LOXL3 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.