

Loxl2 antibody - C-terminal region

Rabbit Polyclonal Antibody

Catalog # AI13669

Product Information

Application	WB
Primary Accession	P58022
Other Accession	NM_033325 , NP_201582
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Chicken, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	87003

Additional Information

Gene ID	94352
Alias Symbol	1110004B06Rik, 4930526G11Rik, 9430067E15Rik, MGC102220
Other Names	Lysyl oxidase homolog 2, 1.4.3.13, Lysyl oxidase-like protein 2, Loxl2
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-Loxl2 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	Loxl2 antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Loxl2
Function	Mediates the post-translational oxidative deamination of lysine residues on target proteins leading to the formation of deaminated lysine (allysine) (By similarity). Acts as a transcription corepressor and specifically mediates deamination of trimethylated 'Lys-4' of histone H3 (H3K4me3), a specific tag for epigenetic transcriptional activation (By similarity). 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) (By similarity). 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 (By similarity). LOXL2-mediated deamination of TAF10 results in

transcriptional repression of genes required for embryonic stem cell pluripotency including POU5F1/OCT4, NANOG, KLF4 and SOX2 (PubMed:[25959397](#)). Involved in epithelial to mesenchymal transition (EMT) via interaction with SNAI1 and participates in repression of E-cadherin, probably by mediating deamination of histone H3 (By similarity). During EMT, involved with SNAI1 in negatively regulating pericentromeric heterochromatin transcription (By similarity). 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 (By similarity). 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 (By similarity). 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 (By similarity). Acts as a regulator of sprouting angiogenesis, probably via collagen IV scaffolding (By similarity). Acts as a regulator of chondrocyte differentiation, probably by regulating expression of factors that control chondrocyte differentiation (PubMed:[21071451](#)).

Cellular Location

Secreted, extracellular space, extracellular matrix, basement membrane {ECO:0000250|UniProtKB:Q9Y4K0}. Nucleus {ECO:0000250|UniProtKB:Q9Y4K0}. Chromosome {ECO:0000250|UniProtKB:Q9Y4K0}. Endoplasmic reticulum {ECO:0000250|UniProtKB:Q9Y4K0}. Note=Associated with chromatin. It is unclear how LOXL2 is nuclear as it contains a signal sequence and has been shown to be secreted. However, a number of reports confirm its intracellular location and its key role in transcription regulation {ECO:0000250|UniProtKB:Q9Y4K0}

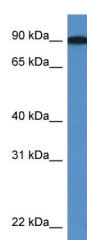
Tissue Location

Ubiquitous. Highest expression in skin, lung and thymus. Present in chondrocytes: mainly expressed by chondrocytes in healing fractures and in epiphyseal growth plates (at protein level)

References

Carninci P.,et al.Science 309:1559-1563(2005).
 Jourdan-Le Saux C.,et al.Matrix Biol. 19:179-183(2000).
 Bignon M.,et al.Blood 118:3979-3989(2011).
 Iftikhar M.,et al.J. Biol. Chem. 286:909-918(2011).

Images



WB Suggested Anti-Loxl2 Antibody Titration: 1.0 µg/ml
 Positive Control: Mouse Heart