

**Anti-LOXL2 Reference Antibody (simtuzumab)
Recombinant Antibody
Catalog # APR10132****Specification**

Anti-LOXL2 Reference Antibody (simtuzumab) - Product Information

Application	FC, E, FTA
Primary Accession	O9Y4K0
Reactivity	Cynomolgus, Human
Clonality	Monoclonal
Isotype	IgG4
Calculated MW	150 KDa

Anti-LOXL2 Reference Antibody (simtuzumab) - Additional Information**Target/Specificity**
LOXL2**Endotoxin**
< 0.001EU/ µg, determined by LAL method.**Conjugation**
Unconjugated**Expression system**
CHO Cell**Format**
Purified monoclonal antibody supplied in PBS, pH6.0, without preservative. This antibody is purified through a protein A column.**Anti-LOXL2 Reference Antibody (simtuzumab) - 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) (PubMed: [27735137](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/25959397))

target="_blank">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

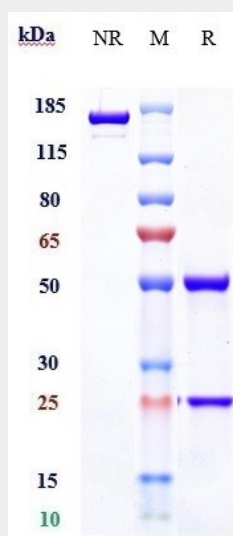
Expressed in many tissues (PubMed:10212285). Highest expression in reproductive tissues, placenta, uterus and prostate (PubMed:10212285). In esophageal epithelium, expressed in the basal, prickle and granular cell layers (PubMed:22204712). Up-regulated in a number of cancers cells and tissues.

Anti-LOXL2 Reference Antibody (simtuzumab) - Protocols

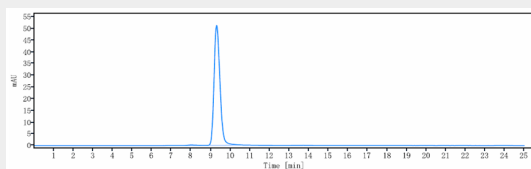
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

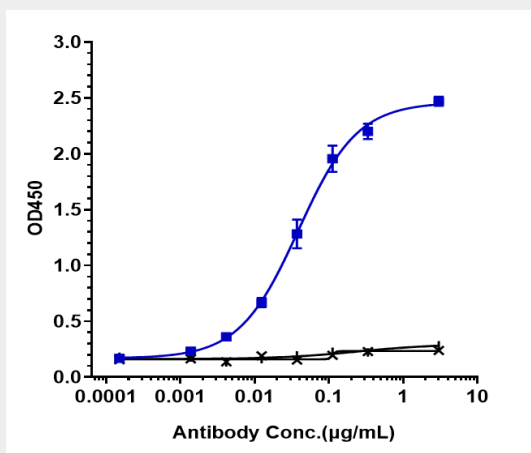
Anti-LOXL2 Reference Antibody (simtuzumab) - Images



Anti-LOXL2 Reference Antibody (sintuzumab) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%



The purity of Anti-LOXL2 Reference Antibody (sintuzumab) is more than 99.41% ,determined by SEC-HPLC.



Immobilized human LOXL2 His at 2 µg/mL can bind Anti-LOXL2 Reference Antibody (sintuzumab) $EC_{50}=0.03857 \mu\text{g/mL}$