

## Product datasheet for TP313323

### LOX (NM\_002317) Human Recombinant Protein

#### Product data:

**Product Type:** Recombinant Proteins  
**Description:** Recombinant protein of human lysyl oxidase (LOX), 20 µg  
**Species:** Human  
**Expression Host:** HEK293T  
**Expression cDNA Clone or AA Sequence:** >RC213323 representing NM\_002317  
Red=Cloning site Green=Tags(s)

MRF~~AW~~TVLLLGPLQLCALVHCAPPAAGQQQPPREPPAAPGAWRQQIQWENNGQVFSLLSLGSQYQPQ  
 RRR  
 DPGA~~AV~~PGAANAS~~AQ~~QPRTPILLIRDNR~~TAA~~ARTRTAGSSGVTAGRPRPTARHWFQAGYSTSRAREAGAS  
 RAENQTAPGEVPALSNLRPPSRVDGMVGDDPYNPYKYSDDN~~PYY~~NYDYERPRPGGRYPGYGTGYFQ  
 Y  
 GLPDLVADPYYIQASTYVQKMSMYNLRCAA~~EEN~~CLASTAYRADVRDYDHRVLLRFPQRVKNQGTSDFLPS  
 RPRYSWEWHSCHQHYHSMDEF~~SHY~~DLLDANTQRRVAEGHKASFCLEDTSCDYG~~HRR~~FACTAHTQGLS  
 PG  
 CYD~~TY~~GADIDCQWIDITDVKPGNYILK~~SV~~NPSYLVPE~~SDY~~TNNWRC~~DIR~~YTGHHAYASGCTISPY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Tag:** C-Myc/DDK  
**Predicted MW:** 46.8 kDa  
**Concentration:** >0.1 µg/µL as determined by microplate BCA method  
**Purity:** > 80% as determined by SDS-PAGE and Coomassie blue staining  
**Buffer:** 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol  
**Bioactivity:** Enzyme activity (PMID: [25924936](#))  
 In vivo treatment (PMID: [26017313](#))  
 Cell treatment (PMID: [26077591](#))  
 Binding assay (PMID: [26601954](#))  
 In vivo treatment (PMID: [28445728](#))  
**Preparation:** Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.



[View online »](#)

**Note:** For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.

**Storage:** Store at -80°C.

**Stability:** Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

**RefSeq:** [NP\\_002308](#)

**Locus ID:** 4015

**UniProt ID:** [P28300](#)

**RefSeq Size:** 1946

**Cytogenetics:** 5q23.1

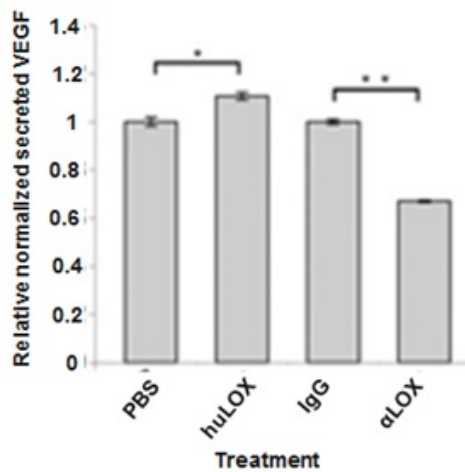
**RefSeq ORF:** 1251

**Synonyms:** AAT10

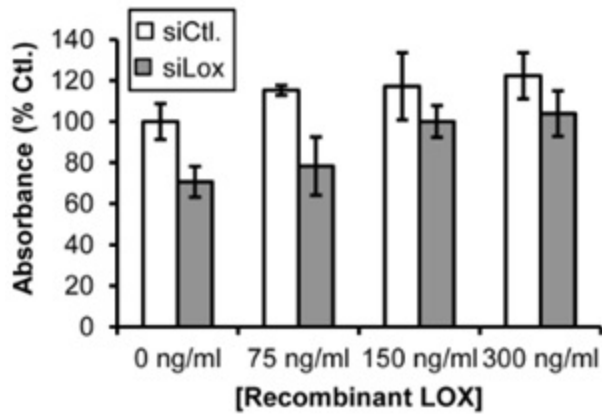
**Summary:** This gene encodes a member of the lysyl oxidase family of proteins. Alternative splicing results in multiple transcript variants, at least one of which encodes a preproprotein that is proteolytically processed to generate a regulatory propeptide and the mature enzyme. The copper-dependent amine oxidase activity of this enzyme functions in the crosslinking of collagens and elastin, while the propeptide may play a role in tumor suppression. In addition, defects in this gene have been linked with predisposition to thoracic aortic aneurysms and dissections. [provided by RefSeq, Jul 2016]

**Protein Families:** Druggable Genome, Secreted Protein

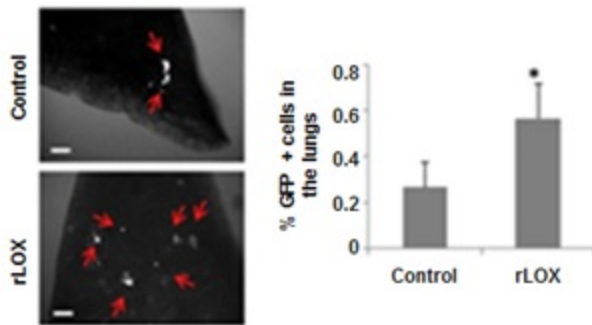
### Product images:



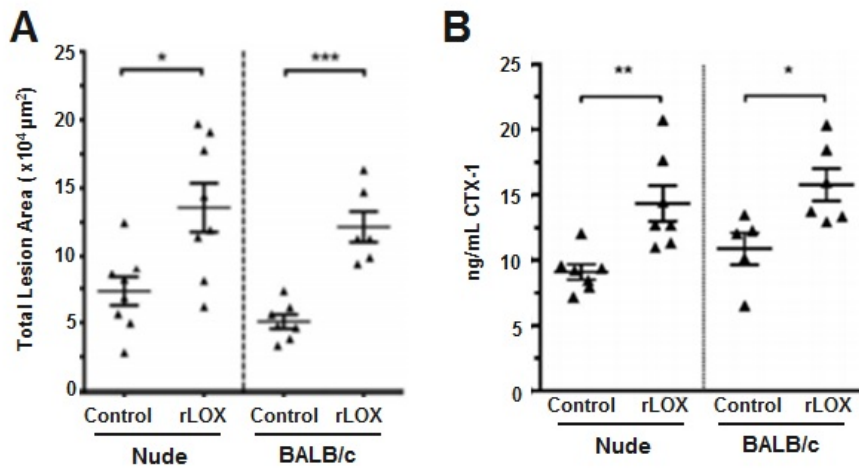
Effect of addition of recombinant LOX protein (huLOX, TP313323) or LOX function inhibiting antibody (aLOX) on secretion of VEGF protein in SW480 cells, as determined by ELISA. n = 2 wells per condition. Figure cited from Cancer Res., 2013. PMID: 23188504



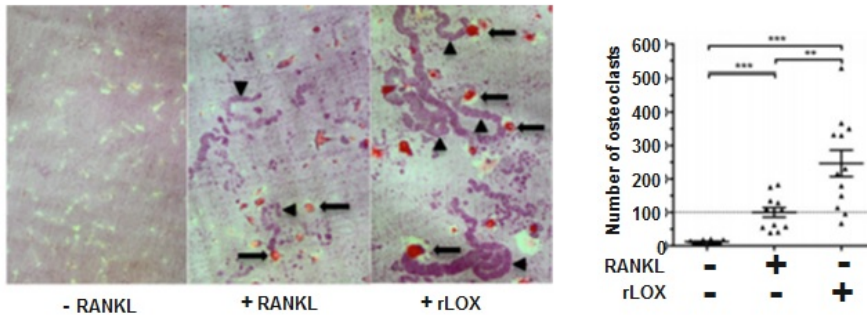
Knocking down of LOX protein caused a reduction in the number of viable cells., which can be rescued by OriGene LOX protein (TP313323). Figure cited from EMBO Mol Med 2015. PMID: 26077591



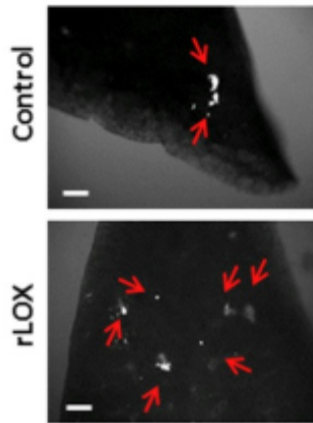
An increased number of metastatic cells was found in the lungs of mice injected with OriGene recombinant LOX protein (TP313323) compared to control mice injected with PBS. Figure cited from Cell Rep 2017. PMID: 28445728



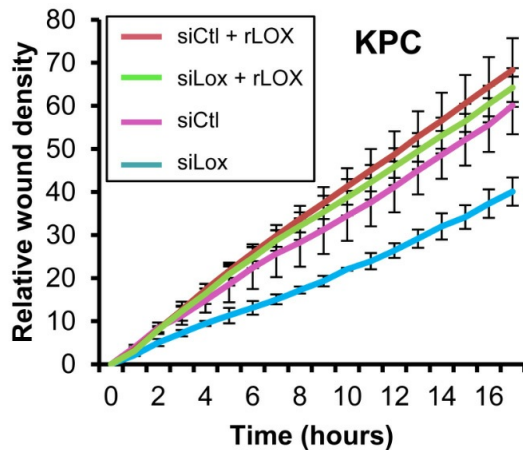
Injection of recombinant LOX (rLOX, TP313323) into both immune-compromised nude and immune-competent BALB/c mice led to (A) the formation of focal osteolytic lesions; (B) increased circulating carboxy terminal telopeptide (CTX), a biomarker of bone turnover. Figure cited from Nature Jun 2015. PMID: 26017313



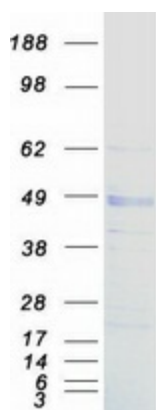
Addition of recombinant LOX (rLOX, TP313323) to pre-osteoclast cultures can generate greater numbers of osteoclasts with a higher resorptive capacity than RANKL-stimulated cultures. arrow = osteoclast, arrowheads = resorption tracks. (n: osteoclast count from 12 independent osteoclast assays per group). Figure cited from Nature Jun 2015. PMID: 26017313



LOX increases the number of metastatic cells in mouse lungs. BALB/c mice were injected with recombinant LOX (rLOX, 25 ug/kg) (OriGene TP313323) or PBS. After 24 hours, the mice were intravenously injected with EMT/6-GFP+ cells (25000 cells/mouse) and processed for a pulmonary metastatic assay. Lung slices were cultured for six days, and GFP+ cells were detected by fluorescence microscopy. Red arrows indicate GFP+ cells. Scale bar, 200 um. Figure cited from Cell Rep, PMID: 28445728



LOX knockdown inhibits KPC cell migration. KPC cells were transfected with siRNA targeting LOX (siLox) or with control siRNA (siCtl), and culture media was supplemented with recombinant LOX protein (rLOX) (OriGene TP313323). Migration of the cells was monitored using an Incucyte system. Quantitation is shown as the average relative density of four wells +/- standard deviation. Figure cited from EMBO Mol Med, PMID: 26077591



Coomassie blue staining of purified LOX protein (Cat# TP313323). The protein was produced from HEK293T cells transfected with LOX cDNA clone (Cat# [RC213323]) using MegaTran 2.0 (Cat# [TT210002]).