



LD Biopharma, Inc.
9924 Mesa Rim Road, Suite B
San Diego, CA 92121
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human LOX Protein
Catalog Number: hTF-1075
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human protein-lysine 6-oxidase (LOX) gene is an extracellular copper enzyme that initiates the crosslinking of collagens and elastin. The enzyme catalyzes oxidative deamination of the epsilon-amino group in certain lysine and hydroxylysine residues of collagens and lysine residues of elastin. In addition to crosslinking extracellular matrix proteins, the encoded protein may have a role in tumor suppression. Defects in this gene are a cause of autosomal recessive cutis laxa type I (CL type I). Two isoforms have been found for this gene.

Full-length mature form of human LOX cDNA (169 - 417aa, Isoform-1, which derived from BC074872) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is expressed in *E. coli* as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: LOX
Accession Number: NP_002308
Species: Human
Size: 50 µg / Vial
Composition: 0.50 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 7 days.

Key References

Lopez,B., et al., *Collagen cross-linking but not collagen amount associates with elevated filling pressures in hypertensive patients with stage C heart failure: potential role of lysyl oxidase*. Hypertension 60 (3), 677-683 (2012)



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Papadantonakis, N., et al., *Megakaryocyte pathology and bone marrow fibrosis: the lysyl oxidase connection*. Blood 120 (9), 1774-1781 (2012)

Yu, Z., et al., *Blimp1 activation by AP-1 in human lung cancer cells promotes a migratory phenotype and is inhibited by the lysyl oxidase Propeptide*. PLoS ONE 7 (3), E33287 (2012)

Applications

1. May be used for in vitro LOX mediated Megakaryocytes proliferation study in the progression of myelofibrosis pathway with “ProFectin” reagent based intracellular delivery of this protein.
2. May be used as specific protein substrate for kinase and ubiquitin (Sumo pathway) related enzyme functional screening assays.
3. May be used for protein-protein interaction mapping.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFDDPYNPKYSDDNPYYNYDITYERPRPGGRYRPGY
GTGYFQYGLPDLVADPYIQASTYVQKMSMYNLRCAAEEENCLASTAYRADVRDYDHRVLLRFPQ
RVKNQGTSDFLPSRPRYSWEWHSCHQHYHSMDEF SHYDLLDANTQRRVAEGHKASFLEDTSCD
YGYHRRFACTAHTQGLSPGCYDTYGADIDCQWIDITDVKPGNYILKVSVNPSYLVPESDYTNNV
VRCDIRYTGHHAYASGCTISPY