

## LOXL2 Protein, Mouse (HEK293, His)

<b>Cat. No.:</b>	HY-P74769
<b>Synonyms:</b>	Lysyl oxidase homolog 2; Lysyl oxidase-related protein WS9-14; LOXL2
<b>Species:</b>	Mouse
<b>Source:</b>	HEK293
<b>Accession:</b>	P58022 (Q26-Q776)
<b>Gene ID:</b>	94352
<b>Molecular Weight:</b>	90-100 kDa

### PROPERTIES

#### AA Sequence

Q Y E G W P Y Q L Q	Y P E Y F Q Q P A P	E H H Q R Q V P S D	V V K I Q V R L A G
Q K R K H N E G R V	E V Y Y E G Q W G T	V C D D D F S I H A	A H V V C R Q V G Y
V E A K S W A A S S	S Y G P G E G P I W	L D N I Y C T G K E	S T L A S C S S N G
W G V T D C K H T E	D V G V V C S E K R	I P G F K F D N S L	I N Q I E S L N I Q
V E D I R I R P I L	S A F R H R K P V T	E G Y V E V K E G K	A W K Q I C N K H W
T A K N S H V V C G	M F G F P A E K T Y	N P K A Y K T F A S	R R K L R Y W K F S
M N C T G T E A H I	S S C K L G P S V T	R D P V K N A T C E	N G Q P A V V S C V
P S Q I F S P D G P	S R F R K A Y K P E	Q P L V R L R G G A	Q V G E G R V E V L
K N G E W G T I C D	D K W D L V S A S V	V C R E L G F G T A	K E A I T G S R L G
Q G I G P I H L N E	V Q C T G T E K S I	I D C K F N T E S Q	G C N H E E D A G V
R C N I P I M G F Q	K K V R L N G G R N	P Y E G R V E V L T	E R N G S L V W G T
V C G Q N W G I V E	A M V V C R Q L G L	G F A S N A F Q E T	W Y W H G N I F A N
N V V M S G V K C S	G T E L S L A H C R	H D E E V A C P E G	G V R F G A G V A C
S E T A P D L V L N	A E I V Q Q T A Y L	E D R P M S L L Q C	A M E E N C L S A S
A V H T D P T R G H	R R L L R F S S Q I	H N N G Q S D F R P	K N G R H A W I W H
D C H R H Y H S M E	V F T Y Y D L L S L	N G T K V A E G H K	A S F C L E D T E C
E G D I Q K S Y E C	A N F G E Q G I T M	G C W D M Y R H D I	D C Q W I D I T D V
P P G D Y L F Q V V	I N P N Y E V P E S	D F S N N I M K C R	S R Y D G Y R I W M
Y N C H V G G A F S	E E T E Q K F E H F	S G L L N N Q L S V	Q

#### Biological Activity

The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

#### Appearance

Lyophilized powder

#### Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

#### Endotoxin Level

<1 EU/ $\mu$ g, determined by LAL method.

#### Reconstitution

It is not recommended to reconstitute to a concentration less than 100  $\mu$ g/mL in ddH<sub>2</sub>O.

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<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

## DESCRIPTION

### Background

LOXL2 Protein plays a multifaceted role in cellular processes, mediating the post-translational oxidative deamination of lysine residues on target proteins, leading to the formation of deaminated lysine (allysine). Functioning as a transcription corepressor, LOXL2 specifically mediates the deamination of trimethylated 'Lys-4' of histone H3 (H3K4me3), a tag associated with epigenetic transcriptional activation. Interestingly, LOXL2 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). Additionally, LOXL2 mediates the deamination of methylated TAF10, a member of the transcription factor IID (TFIID) complex, inducing the release of TAF10 from promoters and inhibiting TFIID-dependent transcription. This process leads to the transcriptional repression of genes crucial for embryonic stem cell pluripotency. LOXL2 is also implicated in epithelial to mesenchymal transition (EMT) by interacting with SNAIL and participating in the repression of E-cadherin. Moreover, LOXL2 is involved in angiogenesis regulation, likely via collagen IV scaffolding, and acts as a regulator of chondrocyte differentiation, showcasing its diverse and intricate roles in cellular and developmental processes.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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