

ERO1L Protein, Human (HEK293, His)

Cat. No.:	HY-P70893
Synonyms:	ERO1-Like Protein Alpha; ERO1-L; ERO1-L-Alpha; Endoplasmic Oxidoreductin-1-Like Protein; Oxidoreductin-1-L-Alpha; ERO1L
Species:	Human
Source:	HEK293
Accession:	Q96HE7 (E24-H468)
Gene ID:	30001
Molecular Weight:	Approximately 71.0 kDa

PROPERTIES

AA Sequence	<p> E E Q P P E T A A Q R C F C Q V S G Y L D D C T C D V E T I D R F N N Y R L F P R L Q K L L E S D Y F R Y Y K V N L K R P C P F W N D I S Q C G R R D C A V K P C Q S D E V P D G I K S A S Y K Y S E E A N N L I E E C E Q A E R L G A V D E S L S E E T Q K A V L Q W T K H D D S S D N F C E A D D I Q S P E A E Y V D L L L N P E R Y T G Y K G P D A W K I W N V I Y E E N C F K P Q T I K R P L N P L A S G Q G T S E E N T F Y S W L E G L C V E K R A F Y R L I S G L H A S I N V H L S A R Y L L Q E T W L E K K W G H N I T E F Q Q R F D G I L T E G E G P R R L K N L Y F L Y L I E L R A L S K V L P F F E R P D F Q L F T G N K I Q D E E N K M L L L E I L H E I K S F P L H F D E N S F F A G D K K E A H K L K E D F R L H F R N I S R I M D C V G C F K C R L W G K L Q T Q G L G T A L K I L F S E K L I A N M P E S G P S Y E F H L T R Q E I V S L F N A F G R I S T S V K E L E N F R N L L Q N I H </p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	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.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

ERO1L protein functions as an oxidoreductase, facilitating disulfide bond formation within the endoplasmic reticulum (ER). Its primary role involves efficiently reoxidizing P4HB/PDI, an enzyme crucial for catalyzing protein disulfide formation, enabling P4HB to engage in successive rounds of disulfide bond formation. Following the reoxidation of P4HB, ERO1L transfers electrons to molecular oxygen through its flavin adenine dinucleotide (FAD) cofactor, leading to the generation of reactive oxygen species (ROS) within the cell. This protein is essential for the proper folding of immunoglobulins and plays a significant role in ER stress-induced apoptosis by activating the inositol 1,4,5-trisphosphate receptor IP3R1, particularly in a CHOP-dependent manner. Additionally, ERO1L participates in the release of unfolded cholera toxin during *V. cholerae* infection, contributing to the retrotranslocation of the toxin.

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

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