

Product datasheet for **SC114943**

ERO1L (ERO1A) (NM_014584) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ERO1L (ERO1A) (NM_014584) Human Untagged Clone
Tag:	Tag Free
Symbol:	ERO1L
Synonyms:	ERO1-alpha; ERO1-L; ERO1-L-alpha; Ero1alpha; ERO1L; ERO1LA
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC114943 sequence for NM_014584 edited (data generated by NextGen Sequencing)

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ATGGGCCGCGGCTGGGGATTCTTGTGGCCTCCTGGGCGCCGTGTGGCTGCTCAGCTCG
GGCCACGAGAGGAGCAGCCCCGGAGACAGCGGCACAGAGGTGCTTCTGCCAGTTAGT
GGTTACTTGGATGATTGTACCTGTGATGTTGAAACCATTGATAGATTTAATAACTACAGG
CTTTTCCCAAGACTACAAAACTTCTTGAAGTGACTACTTTAGGTATTACAAGTAAAC
CTGAAGAGGCCGTGCTCTTCTGGAATGACATCAGCCAGTGTGGAAGAAGGGACTGTGCT
GTCAAACCATGTCAATCTGATGAAGTTCCTGATGGAATTAATCTGCGAGCTACAAGTAT
TCTGAAGAAGCCAATAATCTCATTGAAGAATGTGAACAAGCTGAACGACTTGGAGCAGTG
GATGAATCTCTGAGTGAGGAAACACAGAAGGCTGTTCTTCAGTGGACCAAGCATGATGAT
TCTTCAGATAACTTCTGTGAAGCTGATGACATTCACTCCCTGAAGCTGAATATGTAGAT
TTGCTTCTTAATCTGAGCGCTACACTGGTTACAAGGGACCAGATGCTTGGAAAATATGG
AATGTCATCTACGAAGAAAAGTGTAAAAGCCACAGACAATTAAGACCTTTAAATCCT
TTGGCTTCTGGTCAAGGGACAAGTGAAGAGAACAATTTTACAGTTGGCTAGAAGGTCTC
TGTGTAGAAAAAGAGCATTCTACAGACTTATATCTGGCCTACATGCAAGCATTAAATGTG
CATTTGAGTGCAAGATATCTTTTACAAGAGACCTGGTTAGAAAAGAAATGGGGACACAAC
ATTACAGAATTTCAACAGCGATTTGATGGAATTTTACTGAAAGGAGAAGGTCCAAGAAGG
CTTAAGAAGTGTATTTTCTCTACTTAATAGAATAAGGGCTTTATCCAAGTGTACCA
TTCTTCGAGCGCCAGATTTTCAACTCTTACTGGAAATAAAATTCAGGATGAGGAAAAC
AAAATGTTACTTCTGAAATACTTCATGAAATCAAGTCATTTCTTTGCATTTTGATGAG
AATTCATTTTTGCTGGGGATAAAAAAGAAGCACAACTAAAGGAGGACTTTTCGACTG
CATTTTAGAAATATTTCAAGAATTATGGATTGTGTTGGTTGTTTTAAATGTCGTCTGTGG
GGAAAGTTTCAAGACTCAGGGTTTGGGCACTGCTCTGAAGATCTTATTTTCTGAGAAATTG
ATAGCAAATATGCCAGAAAGTGGACCTAGTTATGAATTCATCTAACAGACAAGAAATA
GTATCATTATTCAACGCATTTGGAAGAATTTCTACAAGTGTGAAAGAATTAGAAAATTC
AGGAAGTGTACAGAATATTCATTAA
    
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Clone variation with respect to NM_014584.1

5' Read Nucleotide Sequence:

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>OriGene 5' read for NM_014584 unedited
ATGTTTCGNAATTTGTNATACGACTCACTATAGGCGGCCGCGNAATTCGCACCAGGTTGTG
CGCGTCGGGTTGCGTCTCCAGGCCGGGGCGTCAAGGAGCCGGGGCGGGGACGGGGCGG
GGCGCAGCGGACCGGGCGGGGCCGAGCCGGGAAGCTGGTGGTGGTGCAGCTCAGCCTCACGCG
CGGGAAGGAACCGGTCCGAGGCCCGGGCTGCCGGCGCGGGCGCCGCGGCACGTCCACAG
GCTGGGTGCGGAGGTGGCGATCGCTGAGAGGCAGGAGGGCCGAGGCGGGCCTGGGAGGGC
GCCCCGAGGTGGGGCGCCGCTGGGGCCGGCCCGCACGGGCTTCACTGAGGGCGCACGGC
CCGCGACCGAGCGTGGGACTGGCCTCCAAGCGTGGGGCGACAAGCTGCCGGAGCTGCA
ATGGGCCCGGGTGGGATTCTTGTGGCCTCCTGGGCCCGTGTGGCTGCTCAGCTCG
GGCCACGAGAGGAGCAGCCCCGGAGACAGCGCACAGAGGTGCTTCTGCCAGTTAGT
GGTTACTTGGATGATTGTACCTGTGATGTTGAAACCATTGATAGATTTAATAACTACAGG
CTTTTCCCAAGACTACAAAACTTCTTGAAGTGACTACTTTAGGTATTACAAGTAAAC
CTGAAGAGGCCGTGCTCTTCTGGAATGACATCAGCCAGTGTGGAAGAAGGGACTGTGCT
GTCAAACCATGTCAATCTGATGAAGTTCCTGATGGAATTAATCTGCGAGCTACAAGTAT
TCTGAAGAAGCCATAATCTCATTGAAGAATGTGAACAAGCTGAACGACTTGNAGCAGT
GGATGAATCTCTGAGTGAGGAACACAGAAGGCTGTTCTTTAGTGGACCAGGCAGATGATC
CTTAGATACCTTCTGGGAAGCTGAGAAATTCAG
    
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3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_014584 unedited NAAAATTTCACTTTGAACCCGCGCCGCATNCTANGATCGAGTTTTTTTTTTTTTTTTTTTT TTTTAAAAATGTGTTTACTTAAAACAATATAATTCTCCTTTACAAAAGCAACTTTATATA AAATGTTTGGCTTAAGACTGTCATTGCTATTATGCCTTTGAATGAAATCCACTCTTTCG CCTCCATTGTCCAGAAACAGGCACATATCAGCTTGTTTTCTTTAATGAATATTCTGTAAC AAGTTCCTGAAGTTTTCTAATTTTACACTTGTAGAAATTTCTCCAAATGCGTTGAAT AATGATACTATTTCTTGCTGGTTAGATGGAATTCATAACTAGGTCACACTTTCTGGCATA TTTGCTATCAATTTCTCAGAAAATAAGATCTTCAGAGCAGTGCCCAAACCTGAGTCTGA AGCTTTCCCCACAGACGACATTTAAAACAACCAACACAATCCATAATTCTTGAAATATTT CTAATAATGCAGTCGAAAGTCCTCTTTAGTTTGTGTGCTCTTTTTTATCCCCAGCAAAA AATGAATTCTCATCAAAATGCAAAGGAAATGACTTGATTTTCATGAAGTATTTCCAGAAAT AACATTTTGTTCCTCATCCTGAATTTTATTTCCAGTAAAGAGTTGAAAATCTGGGCGC TCGAAGAATGGTAACACTTTGGATAAAGCCCTTAGTTCTATTAAGTAGAGAAAATACAAG TTCTTAAGCCTTCTGGACCTTCTCTTCAGTCAAAATCCATCAATCGCTGTTGAAAT TCTGTAATGTTGGTGTCCCATTTCTTTTCTAACCAGGTCTTGTAAAAGATATCTCGC ACTCCAATGCACATTAATGCTTGCATGTAGGCCAAATTAAGTCTGTAGATGCTCTTTTTT CTACCAAG</p>
Restriction Sites:	NotI-NotI
ACCN:	NM_014584
Insert Size:	1910 bp
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info</p>
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_014584.1 , NP_055399.1
RefSeq Size:	3334 bp

RefSeq ORF: 1407 bp

Locus ID: 30001

UniProt ID: [Q96HE7](#)

Cytogenetics: 14q22.1

Domains: ERO1

Protein Pathways: Vibrio cholerae infection

Gene Summary: Oxidoreductase involved in disulfide bond formation in the endoplasmic reticulum. Efficiently reoxidizes P4HB/PDI, the enzyme catalyzing protein disulfide formation, in order to allow P4HB to sustain additional rounds of disulfide formation. Following P4HB reoxidation, passes its electrons to molecular oxygen via FAD, leading to the production of reactive oxygen species (ROS) in the cell. Required for the proper folding of immunoglobulins. Involved in the release of the unfolded cholera toxin from reduced P4HB/PDI in case of infection by V.cholerae, thereby playing a role in retrotranslocation of the toxin. Plays an important role in ER stress-induced, CHOP-dependent apoptosis by activating the inositol 1,4,5-trisphosphate receptor IP3R1.[UniProtKB/Swiss-Prot Function]