

## Product datasheet for **RG203840**

### **ERO1L (ERO1A) (NM\_014584) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	ERO1L (ERO1A) (NM_014584) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ERO1L
Synonyms:	ERO1-alpha; ERO1-L; ERO1-L-alpha; Ero1alpha; ERO1L; ERO1LA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG203840 representing NM\_014584  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGGCCGCGCTGGGGATTCTGTTTGGCCTCCTGGGCGCCGTGGCTGCTCAGCTCGGGCCACGGAG  
 AGGAGCAGCCCCGGAGACAGCGGCACAGAGGTCTTCTGCCAGTTAGTGGTACTTGGATGATTGTAC  
 CTGTGATGTTGAAACCATTGATAGATTTAATACTACAGGCTTTTCCCAAGACTACAAAACTTCTTGAA  
 AGTGACTACTTTAGGTATTACAAGGTAACCTGAAGAGGCCGTCTCTTCTGGAATGACATCAGCCAGT  
 GTGGAAGAAGGGACTGTGCTGTCAAACCATGCAATCTGATGAAGTTCCTGATGGAATTAATCTGCGAG  
 CTACAAGTATTCTGAAGAAGCCAATAATCTCATTGAAGAATGTGAACAAGCTGAACGACTTGAGCAGTG  
 GATGAATCTCTGAGTGAGGAAACACAGAAGGCTGTTCTTCAGTGGACCAAGCATGATGATTCTTCAGATA  
 ACTTCTGTGAAGCTGATGACATTCAGTCCCCTGAAGCTGAATATGTAGATTTGCTTCTTAATCCTGAGCG  
 CTACACTGGTTACAAGGGACCAGATGCTTGAAAAATATGGAATGCATCTACGAAGAAAAGTGTTTAAG  
 CCACAGACAATTAAGACCTTTAAATCCTTTGGCTTCTGGTCAAGGGACAAGTGAAGAGAACACTTTTT  
 ACAGTTGGCTAGAAGTCTCTGTGTAGAAAAAGAGCATTCTACAGACTTATATCTGGCCTACATGCAAG  
 CATTAATGTGCATTTGAGTGCAAGATATCTTTACAAGAGACCTGGTTAGAAAAGAAATGGGGACACAAC  
 ATTACAGAATTTCAACAGCGATTTGATGGAATTTTACTGAGGAGAAGTCCAAGAAGGCTTAAGAAGT  
 TGTATTTTCTCTACTTAATAGAATAAGGGCTTTATCCAAAGTGTACCATTCTTCGAGCGCCAGATTT  
 TCAACTCTTACTGAAAATAAATTCAGGATGAGGAAAACAAAATGTTACTTCTGGAAATACTTCATGAA  
 TAAAGGAGGACTTTCGACTGCATTTTGAAGATTTTCAAGAATTATGGATTGTTGGTTGTTTTAATG  
 TCGTCTGTGGGAAAGCTTCAGACTCAGGGTTTGGGCACTGCTCTGAAGATCTTATTTTCTGAGAAATTG  
 ATAGCAAATATGCCAGAAAGTGGACCTAGTTATGAATTCATCTAACCAGACAAGAAATAGTATCATTAT  
 TCAACGCATTTGGAAGAATTTCTACAAGTGTGAAGAATTAGAAAAGTTCAGGAAGTGTACAGAATAT  
 TCAT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG203840 representing NM\_014584  
 Red=Cloning site Green=Tags(s)

MGRGWGFLFGLLGA VWLLSSGHGEEQPETA AQRFCQVSGYLD DCTCDVETIDRFNNYRLFPR LQKLL E  
 SDYFRYYKVN LKRPCPFWNDI SQCGRRDCAVKPCQSDEVPDGIKSASYKYSEEANLIEECEQAERLGA V  
 DESLSEETQKAVLQWTKHDDSSDNFCEADDIQSPEAEYVDLLNPERYTG YKGPDAWKIWNVIYEENCFK  
 PQTIKRPLNPLASGQGTSEENTFYSWLEGLCVEKRAFYRLISGLHASINVHL SARYLLQETWLEKKWGHN  
 ITEFQQRFDGILTEGEGPRRLKNLYFLYLIELRALSKVLPFFERPDFQLFTGNKIQDEENKMLLLEILHE  
 IKSFPLHFDENSFFAGDKKEAHKLKEDFRLHFRNISRIMDCVGCFCRLWGKLQ TQGLTALKILFSEKL  
 IANMPESGPSYEFHLTRQEIVSLFN AFGRISTSVKELENFRNLLQNIH

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_014584

**ORF Size:** 1404 bp

**OTI Disclaimer:** 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](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

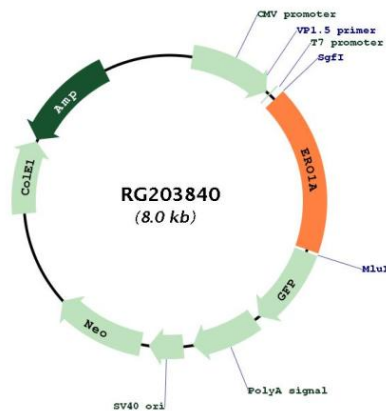
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- Reconstitution Method:**
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\\_014584.3](#)  
**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]

### Product images:



Circular map for RG203840