

## Product datasheet for SC128101

### IREB2 (NM\_004136) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	IREB2 (NM_004136) Human Untagged Clone
Tag:	Tag Free
Symbol:	IREB2
Synonyms:	ACO3; IRE-BP 2; IRE-BP2; IRP2; IRP2AD; NDCAMA
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL6</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC128101 sequence for NM_004136 edited (data generated by NextGen Sequencing)

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ATGGACGCCCAAAAAGCAGGATACGCCCTTTGAGTACCTTATTGAAACATTAATGACAGT
TCACATAAGAAGTTCTTCGATGTATCTAAACTTGGCACCAAGTATGATGTTCTGCCTTAC
TCAATACGGGTCTTGTTGGAAGCTGCTGTACGAAATTGTGATGGCTTTTTAATGAAGAAG
GAAGATGTTATGAACATTTTAGACTGGAAAACCAAAAGCAATGTTGAAGTGCCTTTT
TTCCCTGCCCGTGTCTTCTTCAAGATTTACTGGAATACCAGCAATGGTGGATTTTGTCT
GCTATGAGGGAGGCAGTGAAGAACTCTGGAGGTGATCCTGAGAAAGTCCATCCTGCTTGT
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AATGCACCAAATCCTGGAGGTGGTACCTGCAGAAAGCAGAAAGCTCTCTCCACTTAAA
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CATGGATCAGTGGTCATTGCTGCAGTTATCAGTTGTACCAATAATTGCAATCCATCTGTC  
 ATGCTTGTGCAGGTCCTTTGGCTAAAAAGGCTGTTGAAGCTGGTCTGCGTGTTAAACCT  
 TATATAAGAAACAAGTTTATCTCCAGGCAGTGGGATGGTTACACATTACCTCAGTTCAAGT  
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 GGAATTACATTGAATATACAGACAAGCACTGAAAAAGTATTCAGCGTGATTGCTTCGTTT  
 GAAGATGATGTGGAATAACATTATACAAACATGGAGGATTATTAACCTTTGTGGCACGA  
 AAATTCTCATAG

Clone variation with respect to NM\_004136.2  
 2616 c=>t

**5' Read Nucleotide  
 Sequence:**

>OriGene 5' read for NM\_004136 unedited  
 CAATCCCCCGCCGTTGCCGATTGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAA  
 GCAGAGTTCATTTAGGTGACACTATAGAATACAAGCTACTTGTCTTTTTGCAGCGGCCG  
 CGAATTCGGCACGAGGCCCTTCTCCCCGCTGGCCCCCTCCCCGGAGGGATAATATGGT  
 CTCCGGGATGGACGCCCAAAAGCAGGATACGCCTTTGAGTACCTTATTGAAACATTAA  
 ATGACAGTTCACATAAGAAGTCTTCGATGTATCTAAACTTGGCACCAAGTATGATGTTT  
 TGCCTTACTCAATACGGGCTTGTGGAAGCTGCTGTACGAAATTGTGATGGCTTTTTAA  
 TGAAGAAGGAAGATGTTATGAACATTTTACTGAAAACCAAACAAAGCAATGTTGAAG  
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 CTGCTTGTCCGACAGATCTTACAGTTGACCATTCTTACAAATTGACTTCAGTAAATGTG  
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 CACTTAAAGTGCAGCCTAAGAAGCTTCCCTGCAGAGGCCAGACTACCTGCCGAGGATCTT  
 GTGATTCTGGAGACTAGGCCGAACTCAGGACATTTTCTTCGAGATTGAGAGACACCCA  
 TNCTGTGTCCTTTTCATTTGCAACCAGTGCCCTGACCTGAAACAGTGTTAAANCACTAAG  
 AAGTAGTATTCTGCTGACATCGAGAGAGGCTTCAGTNTTTCAAGTGGAGTTCAAGACGT  
 TTTTCGAGTGTGGCAGTGATCCTTCTGNAAACTGCATGGCTCATCCAATAACTTAGATAAT  
 TGTC A

<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' genomic read for NM_004136 unedited TAGGATCGAGTTTTTTTTTTTTTTTTTTTTGGTAACACAAAATTACCCAAGGTATAGTAAAC AAAGAAGACACAGACAATAAAAACTAACAGATGCCACATTTTGCAAACATAGCATTTGGC TAGAGGCAGAATTATAAGGTATACATATTAACAATACATCCNAGACTCTCCTCTCAAT TTGAACCAATGTTATCAAGTTTTACTTCATGNNTATAGCCAAAAAATTAGAGAACTTGA TTTGTCTGAAATCAGAATTGCTTGATTATTACTGACCAGTNAACTGGAATGGGAAGTTT AATCAAAGTTGCCAGGTTTACACCACCCCGAAAACCTGCGGGGAGACCGTGGGCCGGCC CAAAAAATTATAAAGATGCTTTTTAAAAACATAGCCGCGGTGGGGGCCACCCGGATCCC ACCTTTGGGGGCCAGGGGGGGTTCCAGGCGAGAAATTTTATTTGGCGCCCGGGGAA ACCCCCCTCAAAAAACAAAAAATGGGCGGGGGGGCACCCCTTTTCCCCCCCC CGGAGGGGGGGGGGGAACCCCCCCCCCGGGCGGGGTTTTTTAAAAAAAATACC CTTTTTTTCCCCCCCCCGGGGAACAACCCTCAAAAAAACACCCAAATTTTTTT TTTTCCCCCAACAGGGGAAATTTTTTTAAAAAACAAAGGTTTTTTCTCTCCG GGTGTTCCTCCCAACGGTTTTTGAGGAA
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_004136
<b>Insert Size:</b>	4700 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_004136.1</a> , <a href="#">NP_004127.1</a>
<b>RefSeq Size:</b>	3928 bp
<b>RefSeq ORF:</b>	2892 bp
<b>Locus ID:</b>	3658
<b>UniProt ID:</b>	<a href="#">P48200</a>
<b>Cytogenetics:</b>	15q25.1
<b>Protein Families:</b>	Druggable Genome

**Gene Summary:**

The protein encoded by this gene is an RNA-binding protein that acts to regulate iron levels in the cells by regulating the translation and stability of mRNAs that affect iron homeostasis under conditions when iron is depleted. When iron levels are low, this protein binds to iron-responsive elements (IRES), stem-loop structures located either in the 5' or 3' UTRs. Binding to the 5' UTR represses translation, while binding to the 3' UTR inhibits mRNA degradation. When iron is found in the cell, this protein is degraded in a F-box and leucine rich repeat protein 5-dependent manner. Variants in this gene have been associated with lung cancer and chronic obstructive pulmonary disease (COPD). Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Aug 2017]