

Product datasheet for **SC111309**

QRICH1 (NM_017730) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	QRICH1 (NM_017730) Human Untagged Clone
Tag:	Tag Free
Symbol:	QRICH1
Synonyms:	AB-DIP; VERBRAS
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_017730, the custom clone sequence may differ by one or more nucleotides

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ATGAATAATTCCTAGAGAACCACCTCCTCTTGAAGAGTACATCCGAGTAAAGGCACGGTCTGTCCCGC
AACACAGGATGAAGGAATTTCTGGACTCACTGGCCTCTAAGGGGCCAGAAGCCCTTCAGGAGTTCAGCA
GACAGCCACCACTACCATGGTGTACCAACAGGGTGGGAAGTGCATATACACAGACAGCACTGAAGTGGT
GGGTCTTTGCTTGAACCTGCCTGTCCAGTCAACCACAGTGTTCAGCCACAACCCAGCAAGAACAGCAGA
TCCAGGTTTCAGCAGCCGACGAGGTTCCAGTCCAGGTGCAGGTACAGCAGTCTCCGCAACAGGTCTCGGC
TCAGCTCTCCCCACAACCTCACCGTTCACCAGCCTACTGAGCAACCCATCCAGGTCAGGTGCAGATCCAA
GGCCAGGCACCACAGTACGACAGCCCTCCATTACAGCCCGTCTCTGCAGAGTCCAGTCCCTCGCAGC
TGCAAGCAGCTCAGATCCAGGTGCAGCAGTGCAGCAGCCAGCAGATCCAGGTCGAGAAATCCCGGA
GGAGCACATCCCACATCAGCAAATCCAGGCTCAGCTGGTGGTGGCCAGTCTCTTGTGGTGGTGCAGCAG
ATCCAAATCCAGACCGTGGGTGCCCTTTCCACCACCATCCAGCAGGGCTCACCCGGGAAGGGGAGC
GGCGGGTTGGCAGGCCAGTGTCTCCAACCAGTGAAGAAGCGCAAAGTGGACATGCCCATCACTGTGTC
CTACGCCATCTCAGGGCAGCCGGTGGCCACCGTGTGGCCATTCCACAGGGCCAGCAGCAGATATGTG
TCTTTGAGGCCAGACTTACTGACAGTAGACAGTGGCCACCTGTACAGTGGCACTGGGACCATTACTAGCC
CTACAGGAGAAACCTGGACCATCCCTGTTTATTCTGCCAGCCCCGGGGGACCCTCAGCAGCAGAGCAT
TACCCACATTGCCATTCCCAGGAAGCCTACAACGCAGTTCACGTGAGTGGCTCACCCACAGCCCTGGCA
GCTGTTAAGCTGGAGGATGACAAGGAGAAGATGGTGGGCACCACATCTGTAGTAAAACTCCCATGAAG
AGGTAGTGCAGACCCCTTGCAAATCTCTTTCCAGCAGATTCATGAATGGCAACATCCACATTCAGT
GGCTGTGCAGGCTGTGGCAGGCAGTACCAGAATACGGCTCAAATGTCCATATATGGGACCCCAACAG
CAGCCGCAGCAGCAAATCCCAGGAACAGACACCACCACAGCAGCAGCAGCAGCAACTCCAAGTTA
CTTGTTACAGTCAAACCTGCCAGTTGCTGAAGTTGAACCACAGTACAGCCACAGCCTTCCCAGAACT
TCTGCTTCCAAATTTCTTGAAGCCAGAAGAAGGGCTTGAAGTATGGAAAACTGGGCCAGACCAAGAAT
GCTGAACTAGAGAAGGATGCTCAGAACAGATTGGCACCCATTGGGAGGCGCAACTGCTGCGATTCCAGG
AAGATCTCATCTCCTCTGCTGTGGCAGAGTTGAATTATGGGCTCTGTCTAATGACACGGGAAGCTCGAAA
TGGAGAAGGTGAACCCTATGACCAGATGTGCTCTACTATATTTTCTGTGTATTCAAAGTATCTTTTT
GAAAATGGAAGGGTAGATGACATTTTCTCCGATCTTTATTATGTTGCGTTCACGGAGTGGCTACATGAAG
TTCTGAAGGATGTTCCAGCCCGGGTCACTCCACTTGGCTATGTCTTGGCCAGCCAGTGACTGAGGAGAT
GCTATGGGAGTGAAGCAGCTTGGGGCTCACTCCCCTCCACCTTGTGACCACCCTCATGTTCTTTAAT
ACCAAGTACTTCTATTGAAGACAGTGGACCAGCACATGAAGCTGGCCTTCTCCAAGTCTTGGCAGAGA
CAAAGAAGAACCCTCTAATCCCAGGATAAAAAGCACGAGTATCCGGTACTTGAAGGCCCTTGAATACA
CCAGACTGGCCAGAAAGTTACAGATGACATGTATGCAGAACAGACGGAAAATCCAGAGAATCCATTGAGA
TGTCCCATCAAGCTCTATGATTTCTACCTTCAAATGCCCCAGAGTGTGAAAGGCCGGAATGACACCT
TTTACCTGACACCTGAGCCAGTGGTGGCCCCAACAGCCCAATCTGGTACTCAGTCCAGCCTATCAGCAG
AGAGCAGATGGGACAAATGCTGACGCGGATCCTGGTGATAAGAGAAAATTCAGGAGGCCATCGCAGTGGCC
AATGCAAGCACTATGCACTGA
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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_017730 unedited TTAGGATTTTGTAAACGACTTACTATAGGNNCGGCCGCAATTCGGCACGAGGCGCA AAGTGGACATGCCATCACTGTGTCTACGCCATCTCAGGGCAGCCGGTGGCCACCGTGC TGGCCATTCCACAGGGCCAGCAGAGATTATGTGTCTTTGAGGCCAGACTTACTGACAG TAGACAGTGGCCACCTGTACAGTGCCACTGGGACCATTACTAGCCCTACAGGAGAAACCT GGACCATCCCTGTTTATTCTGCCAGCCCCGGGGGACCCTCAGCAGCAGAGCATTACCC ACATTGCCATCCCCAGGAAGCCTACAACGCAGTTCACGTCACTGGCTCACCCACAGCCC TGGCAGCTGTTAAGCTGGAGGATGACAAGGAGAAGATGGTGGGCACCACATCTGTAGTGA AAAACCTCCATGAAGAGGTAGTGACAGACCCTTGCAAACCTCTCTTTCCAGCACAGTTCA TGAATGGCAACATCCACATTCCAGTGGCTGTGCAGGCTGTGGCAGGCACGTACCAGAATA CGGCTCAAACGTCCATATATGGGACCCCCAACAGCAGCCGAGCAGCAAACCTCCCAGG AACAGACACCACCACAGCAGCAGCAGCAACTCCAAGTTACTTGTTCAGCTCAA CTGTCCAGGTTGCCTGAGTTGAACCACAGTCACAGCCACAGCCTTCCCCAGAACTCTGC TTTCAATTCTTTGAAGCCAGAAGAAGGGCTTGAAGTATGAAAAAAGTGGCCAGACCAAG ATGCTGTACTAGAGGAAGATGCTCAGAACAGATTGCACCCATTGGGAAGCGCCACTGCT GGGATTCCAGAAGATCTCATCTTTGCTGTGGCAGAGTTGAATATGGCCTCTGTCTTAT GACACCGAAGCTCGAATATGGAGAAGTGAACCT</p>
3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_017730 unedited GCACGCAATCTATAGTCGAGNNNTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTGGTGAAAAACG TGCTTGTCACTTAAATAAACAAGTAAAGTAAGAATACCTAAGAGAAACAGAGTGGTATC TTTATATGATACACAAGTGTATGTTACAAGAATCCATCAGGCACAGGAGCCTCAGGTTT TAAGGCCTCAATGTTAGGCCAACAAAAAAAAAAGGCATGGGAAAGTTTTTACTTTTAC ATCTAAAATGTCCTTGTCAATAAAGGAGGTGTAATAGAAATTGGCTTTAATAAATCATA ATTGAAGTCCCCTCATTTTTCTTCCATTAAGATGCTAAGTTTATGTCTGATCATGAAGA AAGAAAAGAACATCGTCCCCTGTGGTCAGCAAAGTCTGTGAGCCAGTGGAAAGTCGGCT GGGGAGATTCCCTCCAGGTCATCCATCATTAAATCCATCTCTTGAAGATGGAAAGG GGCCACATTTCTTTTACAGTCCAAGCCCTTTCCCAGGCCCCAGACAAAAAAGAGTCAG CCAGCAACTTTCTAGGACATATGACACTCAAGGAAACCCAGAGCCACCATCGGCTGAAGA GTCTGCCGCAAGTTTATGAAGATGCAAAGGGGGCAAAGNTTCTTTTTATTTTAAAC AGAAGCAGCCTGAAAGGCTTCGCTACTACCCCAATAAAAAAAAAAAGAAAAAATGGAGG CCTCTTCTTAGTGTAAAGTCTGTCTGGGTTTTCTGGCTGTTTCTCTTGTGCATGNN CAAGCATCTCATGATTATGCTGCACTGGCCCTGCGATGCCCTCTGATTTCTCTATCACC AGACCGGTNAGCATTGGCCATCGCTCTTGTGATAGCTGACTGATACANATTGGCTGTTG GGGGCACACTGGCTCAGGGTCAGTAAAGTGCATTCCGCCCTTCACTCTGGGCATTGAA AAGAA</p>
Restriction Sites:	NotI-NotI
ACCN:	NM_017730
Insert Size:	2500 bp
OTI Disclaimer:	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).
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_017730.1](#), [NP_060200.1](#)

RefSeq Size: 3331 bp

RefSeq ORF: 1251 bp

Locus ID: 54870

UniProt ID: [Q2TAL8](#)

Cytogenetics: 3p21.31

Protein Families: Druggable Genome

Gene Summary: Transcriptional regulator that acts as a mediator of the integrated stress response (ISR) through transcriptional control of protein homeostasis under conditions of ER stress (PubMed:33384352). Controls the outcome of the unfolded protein response (UPR) which is an ER-stress response pathway (PubMed:33384352). ER stress induces QRICH1 translation by a ribosome translation re-initiation mechanism in response to EIF2S1/eIF-2-alpha phosphorylation, and stress-induced QRICH1 regulates a transcriptional program associated with protein translation, protein secretion-mediated proteotoxicity and cell death during the terminal UPR (PubMed:33384352). May cooperate with ATF4 transcription factor signaling to regulate ER homeostasis which is critical for cell viability (PubMed:33384352). Upregulates CASP3/caspase-3 activity in epithelial cells under ER stress. Central regulator of proteotoxicity associated with ER stress-mediated inflammatory diseases in the intestines and liver (PubMed:33384352). Involved in chondrocyte hypertrophy, a process required for normal longitudinal bone growth (PubMed:30281152).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longest transcript. Variants 1-8 encode the same protein.