

## Product datasheet for **RG230646**

### Calcium Sensing Receptor (CASR) (NM\_001178065) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Calcium Sensing Receptor (CASR) (NM_001178065) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Calcium Sensing Receptor
Synonyms:	CAR; EIG8; FHH; FIH; GPRC2A; hCasR; HHC; HHC1; HYPOC1; NSHPT; PCAR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG230646 representing NM_001178065 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCATTATAGCTGCTGCTGGGTCCTTTGGCACTCACCTGGCACACCTCTGCCTACGGCCAGACC  
AGCGAGCCAAAAGAAGGGGACATTATCCTTGGGGGCTCTTTCCTATTCATTTGGAGTAGCAGCTAA  
AGATCAAGATCTCAAATCAAGGCCGAGTCTGTGGAATGTATCAGGTATAATTTCCGTGGTTCGCTGG  
TTACAGGCTATGATATTTGCCATAGAGGAGATAAACAGCAGCCAGCCCTTCTTCCAATTGACGCTGG  
GATACAGGATATTTGACACTTGAACACCGTTTCTAAGGCCTTGAAGCCACCCTGAGTTTTGTTGCTCA  
AAACAAAATTGATTCTTTGAACCTTGATGAGTTCTGCAACTGCTCAGAGCACATTCCTCTACGATTGCT  
GTGGTGGGAGCAACTGGCTCAGGCGTCTCCACGGCAGTGGCAAACTGCTGTTGGGCTCTTCTACATCCCC  
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CCCCAATGATGAGCACCAGGCCACTGCCATGGCAGACATCATCGAGTATTTCCGCTGGAAGTGGGTTGGG  
ACAATTGCAGCTGATGACGACTATGGGCGGCCGGGATTGAGAAATTCGAGAGGAAGCTGAGGAAAGGG  
ATATCTGCATCGACTTCAGTGAACATCTCCAGTACTCTGATGAGGAAGAGATCCAGCATGTGGTAGA  
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CCCAGGCTTCCGGGAATTCCTGAAGAAGTCCATCCCAGGAAGTCTGTCCACAATGGTTTTGCAAGGAG  
TTTTGGGAAGAAACATTTAACTGCCACCTCCAAGAAGGTGCAAAAGGACCTTTACCTGTGGACACCTTTC  
TGAGAGGTCACGAAGAAAGTGGCGACAGGTTTAGCAACAGCTCGACAGCCTTCCGACCCCTGTACAGG  
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TCACCAATGGCTCCTGTGCAGACATCAAGAAAGTTGAGGCGTGGCAGGCTCTGAAGCACCTACGGCATCT  
AAACTTTACAAACAATATGGGGAGCAGGTGACCTTTGATGAGTGTGGTACCTGGTGGGAACTATTCC



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ATCATCAACTGGCACCTCTCCCCAGAGGATGGCTCCATCGTGTAAAGGAAGTCGGGTATTACAACGTCT  
 ATGCCAAGAAGGGAGAAAGACTTTCATCAACGAGGAGAAAATCCTGTGGAGTGGGTTCTCCAGGGAGCC  
 ACTCACCTTTGTGCTGTCTGTCTCCAGGTGCCCTTCTCCAACCTGCAGCCGAGACTGCCTGGCAGGGACC  
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 CCTGACCTCCCACAGCAGCAACGATCTCAGCAGCAGCCAGATGCAAGCAGAAGTTCATCTTTGGCAGC  
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 GTGCGGGGAAACGGACTTAGATCTGACCGTCCAGGAAACAGGTCTGCAAGGACCTGTGGGTGGAGACCAG  
 CGGCCAGAGTGGAGGACCCTGAAGAGTTGCCCCAGCACTTGTAGTGTCCAGTTCACAGAGCTTTGTCA  
 TCAGTGGTGGAGGCAGCACTGTTACAGAAAACGTAGTGAATTCA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG230646 representing NM\_001178065  
 Red=Cloning site Green=Tags(s)

MAFYSCCVLLALTWHTSAYGPDQRAQKKGDIILGGLFPIHFGVAAKDQDLKSRPESVEICIRYNFRGFRW  
 LQAMIFAIEEINSSPALLPNLTLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNDEFNCSEHIPSTIA  
 VVGATGSGVSTAVANLLGLFYIPQVSYASSRLLSNKNQFKSFLRTIPNDEHQATAMADIEYFRWNWVG  
 TIAADDDYGRPGIEKFREEAEERDIDFSELISQYSDEEEIQHVVEVIQNSTAKVIVVFSGGPDLEPLI  
 KEIVRRNITGKIWLASEAWASSSLIAMPQYFHVVGTTIGFALKAGQIPGFREFLKKVHPRKSVHNGFAKE  
 FWEETFNCHLQEGAKGPLPVDFTLRGHEESGDRFSNSSTAFRPLCTGDENISSVETPYIDYTHLRISYNV  
 YLAVYSIAHALQDIYTCLPGRGLFTNGSCADIKKVEAWQVLKHLRHLNFTNNMGEQVTFDECGDLVGNYS  
 IINWHLSPEDGSIVFKEVGYNNVYAKKGERLFINEEKILWSGFSREPLTFVLSVLQVFPFNCSRDLAGT  
 RKGIIIEGPTCCFECVECPDGEYSDETDASACNKCPDDFWSNENHTSCIAKEIEFLSWTEPFGIALTLFA  
 VLGIFLTAFLVGVFIFKFRNTPIVKATNRELSYLLLSLLCCFSSSLFFIGEPQDWTCLRQPAFGISFVL  
 CISCILVKTNRVLLVFEAKIPTSFHRKWWGLNLQFLLVFLCTFMQIVICVIWLYTAPPSSYRNQELEDEI  
 IFITCHEGSLMALGFLIGYTCLLAAICFFFAFKSRKLPENFNEAKFITFSLIFFIVWISFIPAYASTYG  
 KFVSAVEVIAILAASFGLLACIFFNKIYIILFKPSRNTIEEVRCSTAHAFAKVAARATLRRSNVSRKRSS  
 SLGGSTGTPSSSISKSNSDPFPQPERQKQQPLALTQQEQQQPLTLPQQQRSQQPRCKQKVFVGS  
 GTVTFSLSFDEPQKNAMHRNSTHQNSLEAQKSSDTLTRHQPLLPQCGETDLDLTVQETGLQGPVGGDQ  
 RPEVEDPEELSPALVSSSQSFVISGGSTVTENVVNS

TRTRPLE – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001178065

**ORF Size:** 3264 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\\_001178065.1](#), [NP\\_001171536.1](#)

RefSeq Size: 5011 bp

RefSeq ORF: 3267 bp

Locus ID: 846

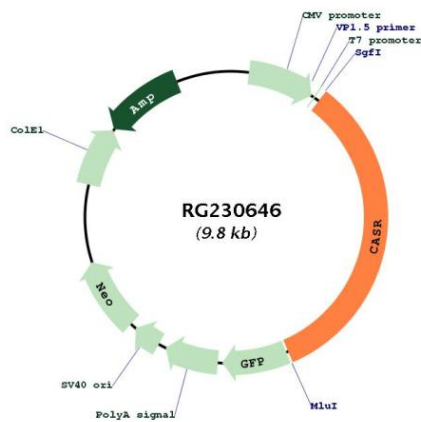
UniProt ID: [P41180](#)

Cytogenetics: 3q13.33-q21.1

Protein Families: Druggable Genome, GPCR, Transmembrane

**Gene Summary:** The protein encoded by this gene is a plasma membrane G protein-coupled receptor that senses small changes in circulating calcium concentration. The encoded protein couples this information to intracellular signaling pathways that modify parathyroid hormone secretion or renal cation handling, and thus this protein plays an essential role in maintaining mineral ion homeostasis. Mutations in this gene are a cause of familial hypocalciuric hypercalcemia, neonatal severe hyperparathyroidism, and autosomal dominant hypocalcemia. [provided by RefSeq, Aug 2017]

**Product images:**



Circular map for RG230646