

Product datasheet for **MG221396**

Calhm1 (NM_001081271) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Calhm1 (NM_001081271) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Calhm1
Synonyms: EG546729
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG221396 representing NM_001081271
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGATAAGTTTCGGATGATCTTCCAGTCTTGAATCCAACCAAGAGTCCTTCATGAATGGCATCTGTG
GCATCATGGCGCTGGCCAGTGCGCAGATGTATTCTGCCTTTGACTTCAACTGCCCTGCTTACCCGGCTA
CAACGTGGTCTACAGCCTGGGCATACTGCTGACGCTCCCCTGGTGTCTTCTGCTTGGTCTGGTCATG
AACAAACATATCCATGCTAGCTGAAGAGTGGAAGCGCCCGCAGGTCGCCGGGCAAGGACCCAGCTG
TTCTACGCTACATGTTCTGTTCCATGGCCAGAGAGCTCTCATCGCCCTGTCGTCTGGGTGGCTGTCAC
ACTGCTGGATGGCAAGTCTTCTGTGCCTTCTGCACAGCTGTGCCGTGGCCACACTAGGCAATGGC
AGCCTGGTGGCGGCTGCTGCTCCAGAACTTGTCTGCCTACTGGCTCGGGTACCTGCCTGAGATCT
ATGATGGGAAGTGGCTGCTAGCCGAGAGGTGGCCGTGCGGTATTTGCGCTGCATCTCTCAGGCACTGGG
TTGGTCTTCTGCTGCTGCTGACCACATTACTAGCGTTCTGTTGGTACGCTCTGTGCGTCCCTGCTTACGCGAG
GTCGCCTTCTCAAGAGCAAGTACTGGTCCCACTACATTGACATTGAGCGCAAGCTTTCGATGAGACAT
GCACAGAGCATGCCAAAGCCTTTGCTAAGGTATGTATCCAGCAGTTCTTTGAAGCCATGAACCATGACCT
GGAAGTGGGTCAATCCACGGAGTACTGGCCACGGCCACAGCCACAGCCACAGCCACAGAGGCTGTCCAA
AGTCCCTCGACAGGACAGAAGAAGAGAGGGAGAAGTTGCGTGGCATCACTGACCAAGGCCACCATGAATA
GGCTACTCACAAGCTGGCACAAATGCAAACCACCACTGAGGCTGGGCCAGGAGGCCACCACTGATGAGCAA
CGGCTGGGCTGGGGCGAGCCCCGGCTCCACGCAAGGAAGTGGCCACCTACTTCAGCAAAGTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG221396 representing NM_001081271
Red=Cloning site Green=Tags(s)

MDKFRMIFQFLQSNQESFMNGICGIMALASAQMYSAFDNCPCLPGYNVVYSLGILLTPPLVLFLLGLVM
 NNNISMLAEEWKRPAGRRAKDPAVLRMFCSMAQRALAPVVVAVTLLDGKCFCACTAVPVATLGNQ
 SLVPGLPAPELARLLARVPCPEIYDGNWLLAREVAVRYLRCSIQALGWSFVLLTLLAFVVRVSRPCFTQ
 VAFLKSKYWSHYIDIERKLFDETCTEHAFAKVCIIQQFFEAMNHDELGHGTHGLATATATATATEAVQ
 SPSDRTEEREKLRGITDQGTMRLLTSWHKCKPPLRLGQEAPLMSNGWAGGEP RPPRKEVATYFSKV

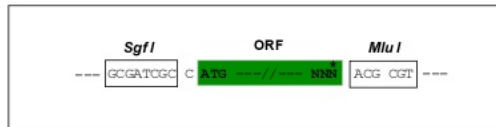
TRTRPLE - GFP Tag - V

Restriction Sites:

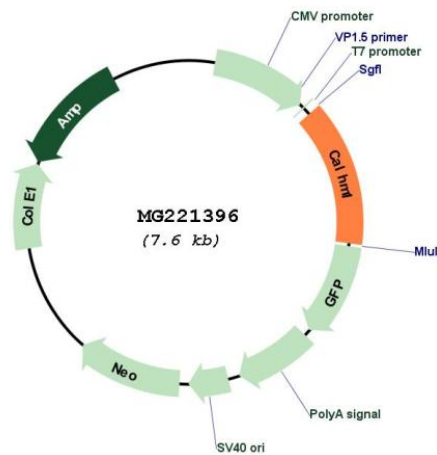
SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM_001081271

ORF Size: 1044 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 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_001081271.1](#), [NP_001074740.1](#)

RefSeq Size: 1047 bp

RefSeq ORF: 1047 bp

Locus ID: 546729

UniProt ID: [D3Z291](#)

Cytogenetics: 19 C3

Gene Summary:

Pore-forming subunit of a voltage-gated ion channel required for sensory perception of sweet, bitter and umami tastes. Specifically present in type II taste bud cells, where it plays a central role in sweet, bitter and umami taste perception by inducing ATP release from the cell, ATP acting as a neurotransmitter to activate afferent neural gustatory pathways. Acts both as a voltage-gated and calcium-activated ion channel: mediates neuronal excitability in response to changes in extracellular Ca^{2+} concentration. Has poor ion selectivity and forms a wide pore (around 14 Angstroms) that mediates permeation of Ca^{2+} , Na^{+} and K^{+} , as well as permeation of monovalent anions. Acts as an activator of the ERK1 and ERK2 cascade. Triggers endoplasmic reticulum stress by reducing the calcium content of the endoplasmic reticulum. May indirectly control amyloid precursor protein (APP) proteolysis and aggregated amyloid-beta (A β) peptides levels in a Ca^{2+} dependent manner.[UniProtKB/Swiss-Prot Function]