

Product datasheet for **RC206595**

GCAP1 (GUCA1A) (NM_000409) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: GCAP1 (GUCA1A) (NM_000409) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: GCAP1
Synonyms: GUCA1A; GUCA1ANB-GUCA1A
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC206595 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGCAACGTGATGGAGGAAAGTCAGTGGAGGAGCTGAGCAGCACCGAGTGCCACCAAGTGGTACAAGA
AGTTCATGACTGAGTGCCCTCTGGCCAACTCACCTCTATGAGTTCGCCAGTTCCTCGGCCTCAAGAA
CCTGAGCCCGTCGCCAGCCAGTACGTGGAACAGATGTTTGAGACTTTTGACTTCAACAAGGACGGCTAC
ATTGATTTTCATGGAGTACGTGGCAGCGCTCAGCTTGGTCTCAAGGGGAAGGTGGAACAGAAGCTCCGCT
GGTACTTCAAGCTCTATGATGTAGATGGCAACGGCTGCATTGACCGCGATGAGCTGCTCACCATCATCCA
GGCCATTCGCGCCATTAACCCCTGCAGCGATACCAACCATGACTGCAGAGGAGTTCACCGATACAGTGTTT
TCCAAGATTGACGTCAACGGGGATGGGGAAGTCTCCCTGGAAAGAGTTTATAGAGGGCGTCCAGAAGGACC
AGATGCTCCTGGACACTGACACGAAGCCTGGACCTTACCCGCATCGTGCCAGGCTCCAGAATGGCGA
GCAAGACGAGGAGGGGCTGACGAGGCCGCTGAGGCAGCCGGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC206595 protein sequence
Red=Cloning site Green=Tags(s)

MGNVMEGKSVEELSSTECHQWYKFMTECPGQLTLYEFRQFFGLKNLSPSASQYVEQMFETDFDNKDG
IDFMEYVAALSLVLKGVKVEQKLRYWFKLYDVGNGCIDRDELLTIIQAIRAINPCSDTTMTAEFTDVF
SKIDVNGDGELSLEEFIEGVQKQMLLDLTLTRSLDLTRIVRRLQNGEQDEEGADEAAEAAG

TRTRPLEQKLISEEDLAANDILDYKDDDDKV



Chromatograms: https://cdn.origene.com/chromatograms/mk6330_g02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000409

ORF Size: 603 bp

OTI Disclaimer: 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.

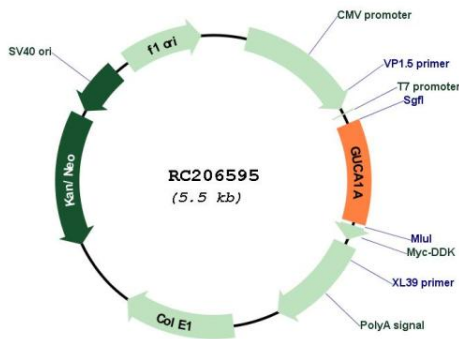
Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_000409.5](#)

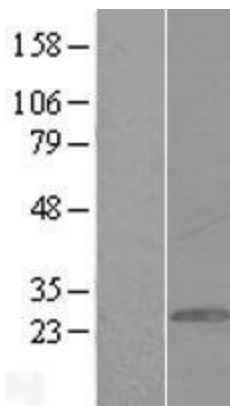
RefSeq Size: 1918 bp

RefSeq ORF:	606 bp
Locus ID:	2978
UniProt ID:	P43080
Cytogenetics:	6p21.1
Domains:	EFh
Protein Families:	Druggable Genome
Protein Pathways:	Olfactory transduction
MW:	22.9 kDa
Gene Summary:	This gene encodes an enzyme that plays a role in the recovery of retinal photoreceptors from photobleaching. This enzyme promotes the activity of retinal guanylyl cyclase-1 (GC1) at low calcium concentrations and inhibits GC1 at high calcium concentrations. Mutations in this gene can cause cone dystrophy 3 and code-rod dystrophy 14. provided by RefSeq, Jul 2020]

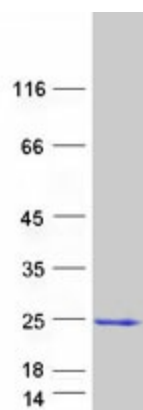
Product images:



Circular map for RC206595



Western blot validation of overexpression lysate (Cat# [LY424724]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206595 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GUCA1A protein (Cat# [TP306595]). The protein was produced from HEK293T cells transfected with GUCA1A cDNA clone (Cat# RC206595) using MegaTran 2.0 (Cat# [TT210002]).