

Product datasheet for **RC217886**

GCSH (NM_004483) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: GCSH (NM_004483) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: GCSH
Synonyms: GCE; NKH
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC217886 representing NM_004483
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGCTGCGAGTGGTGCGGAGCGTGCGGGCCCTGCTCTGCACCCTGCGCGGGTCCCCTTACCCGCCG
CGCCCTGCCCGCCGAGGCCCTGGCAGCTGGGGTGGGCGCGTCCGTACGCTGCGCACTGGACCCGCTCT
GCTCTCGGTGCGTAAATTCACAGAGAAACACGAATGGGTAAACAGAAAATGGCATTGGAACAGTGGGA
ATCAGCAATTTGCACAGGAAGCGTTGGGAGATGTTGTTATTGTAGTCTCCCTGAAGTTGGACAAAAT
TGAACAAACAAGATGAGTTTGGTCTTTGAAAGTGAAAGCTGCTAGTGAAGTCTATTCTCCTTTATC
AGGAGAAGTAACTGAAATTAATGAAGCTTTGCAGAAAATCCAGGACTTGTAAACAAATCTGTTATGAA
GATGGTTGGCTGATCAAGATGACACTGAGTAACCTTCAGAACTAGATGAAGTATGAGTGAAGAAGCAT
ATGAGAAATACATAAAATCTATTGAGGAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC217886 representing NM_004483
Red=Cloning site Green=Tags(s)

MALRVVRSVRLALLCTLRVPLPAAPCPPRPWQLGVGAVRTLRTGPALLSVRKFTKHEWVTTEIGITVG
ISNFAQEALGDVYVYCSLPEVGTGLNKQDEFGALESVKAASELYSPLSGEVTEINEALAENPGLVNKSCYE
DGWLIKMTLSNPSELDELMSEEAYEKYIKSIEE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6036_g04.zip



Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004483

ORF Size: 519 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.

RefSeq: [NM_004483.2](#)

RefSeq Size: 1161 bp

RefSeq ORF: 522 bp

Locus ID: 2653

UniProt ID: [P23434](#)

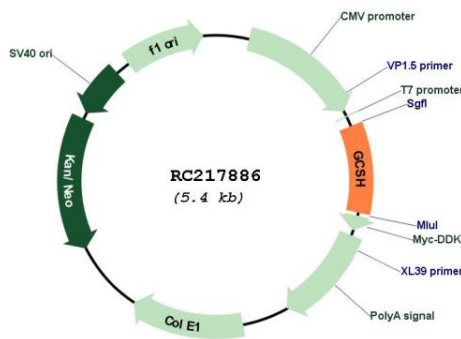
Cytogenetics: 16q23.2

Domains: GCV_H

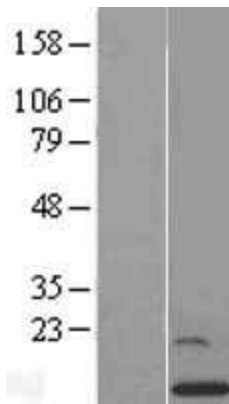
MW: 18.91 kDa

Gene Summary: Degradation of glycine is brought about by the glycine cleavage system, which is composed of four mitochondrial protein components: P protein (a pyridoxal phosphate-dependent glycine decarboxylase), H protein (a lipoic acid-containing protein), T protein (a tetrahydrofolate-requiring enzyme), and L protein (a lipoamide dehydrogenase). The protein encoded by this gene is the H protein, which transfers the methylamine group of glycine from the P protein to the T protein. Defects in this gene are a cause of nonketotic hyperglycinemia (NKH). Two transcript variants, one protein-coding and the other probably not protein-coding, have been found for this gene. Also, several transcribed and non-transcribed pseudogenes of this gene exist throughout the genome.[provided by RefSeq, Jan 2010]

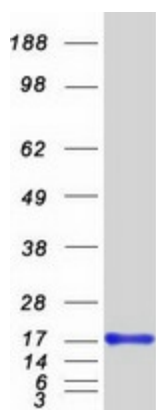
Product images:



Circular map for RC217886



Western blot validation of overexpression lysate (Cat# [LY417961]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217886 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GCSH protein (Cat# [TP317886]). The protein was produced from HEK293T cells transfected with GCSH cDNA clone (Cat# RC217886) using MegaTran 2.0 (Cat# [TT210002]).