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Product datasheet for RG211292

GLDC (NM_000170) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GLDC (NM_000170) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GLDC
Synonyms:	GCE; GCSP; HYGN1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>RG211292 representing NM_000170
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCAGTCCTGTGCCAGGGCGTGGGGGCTGCGCCTGGGCCGCGGGGTCGGGGGCGGCCGCCGCCTGGCTG
GGGGATCGGGGCCGTGCTGGGCGCCGCGGAGCCGGGACAGCAGCAGTGGCGGCGGGGACAGCGCCGCGGC
TGGGGCCTCGCGCCTCCTGGAGCGCCTTCTGCCCAGACACGACGACTTCGCTCGGAGGCACATCGGCCCT
GGGGACAAAGACCAGAGAGAGATGCTGCAGACCTTGGGGCTGGCGAGCATTGATGAATTGATCGAGAAGA
CGGTCCCTGCCAACATCCGTTTGAAAAGACCCTTGAAAATGGAAGACCCTGTTTGTGAAAATGAAATCCT
TGCAACTCTGCATGCCATTTCAAGCAAAAACCAGATCTGGAGATCGTATATTGGCATGGGCTATTATAAC
TGCTCAGTGCCACAGACGATTTTGCGGAACTTACTGGAGAACTCAGGATGGATCACCCAGTATACTCCAT
ACCAGCCTGAGGTGTCTCAGGGGAGGCTGGAGAGTTTACTCAACTACCAGACCATGGTGTGTGACATCAC
AGGCCTGGACATGGCCAATGCATCCCTGCTGGATGAGGGGACTGCAGCCGCAGAGGCACTGCAGCTGTGC
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AGACTCGAGCCAAATATACTGGAGTCCTCACTGAGCTGAAGTTACCCTGTGAAATGGACTTCAGTGGAAA
AGATGTCAGTGGAGTGTTGTTCCAGTACCCAGACACGGAGGGGAAGGTGGAAGACTTTACGGAACTCGTG
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CTACCATGGTTCCCATGGGCTGGAGCATATTGCTAGGAGGGTACATAATGCCACTTTGATTTTGTCAGAA
GGTCTCAAGCGAGCAGGGCATCAACTCCAGCATGACCTGTTCTTTGATACCTTGAAGATTCATTGTGGCT
GCTCAGTGAAGGAGGTCTTGGGCAGGGCGGCTCAGCGGCAGATCAATTTTCGGCTTTTTGAGGATGGCAC
ACTTGGTATTTCTCTTGATGAAACAGTCAATGAAAAAGATCTGGACGATTTGTTGTGGATCTTTGGTTGT

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GAGTCATCTGCAGAACTGGTTGCTGAAAGCATGGGAGAGGAGTGCAGAGGTATTCCAGGGTCTGTGTTCA
AGAGGACCAGCCCGTTCCTCACCCATCAAGTGTTCAACAGCTACCACTCTGAAACAAACATTGTCCGGTA
CATGAAGAAACTGGAAAATAAAGACATTTCCCTTGTTCACAGCATGATTCCACTGGGATCCTGCACCATG
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CCTGTCCTGTGGGAACCGTCAGTGCGGCCCCATGGGGCTCCAGTTCCATCTTGCCCATTTCCTGGGCTTA
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TTATGGATTTCACGCCCCTACCATGTCCTGGCCTGTGGCAGGGACCCTCATGGTGGAGCCCACTGAGTCG
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AAATTCTGGCCAACGATTGCCCGGATTGATGACATATATGGAGATCAGCACCTGGTTTGTACCTGCCCAC
CCATGGAAGTTTATGAGTCTCCATTTTCTGAACAAAAGAGGGCGTCTTCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG211292 representing NM_000170
Red=Cloning site Green=Tags(s)

MQSCARAWGLRLGRGVGGGRRLAGGSGPCWAPRSRDSSSGGGDSAAAGASRLLERLLPRHDDFARRHIGP
GDKDQREMLQTLGLASIDELIEKTVPANIRLKRPLKMEDPVCENEILATLHAISSKNQIWRSYIGMGYYN
CSVPQTILRNLLENSGWITQYTPYQPEVSQGRLESLLNYQTMVCDITGLDMANASLLDEGTAAAEALQLC
YRHNKRRKFLVDPRCHPQTIAVVQTRAKYTGVLTELKLPCEMDFSGKDVSGVLFQYPDTEGKVEDFTELV
ERAHQSGSLACCATDLLALCILRPPGEFGVDIALGSSQRFGVPLGYGGPHAAFFAVRESLVRMMPGRMVG
VTRDATGKEVYRLALQTREQHIRRDKATSNICTAQALLANMAAMFRIYHGSHGLEHIARRVHNATLILSE
GLKRAGHQLQHDLFFDTLKIHCGCSVKEVLGRAAQRQINFRLFEDGTLGISLDETVNEKDLDDLLWIFGC
ESSAELVAESMGEECRGIPGSVFKRTSPFLTHQVFNSYHSETNIVRYMKKLENKDISLVHSMIPLGSCTM
KLNSSSELAPITWKEFANIHPFVPLDQAQGYQQLFRELEKDLCELTGYDQVCFQPNSGAQGEYAGLATIR
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STNGVFEENISDVCDLIHQHGGQVYLDGANMNAQVGICRPGDFGSDVSHLNLHKTFCIPHGGGGPGMGPI
GVKKHLAPFLPNHPVISLKRNEDACPVGTVSAAPWGSSSILPISWAYIKMMGGKGLKQATETAILNANYM
AKRLETHYRILFRGARGYVGHEFILDTRPFKKSANIEAVDVAKRLQDYGFHAPTMSWPVAGTLMVEPTES
EDKAELDRFCDAMISIRQEIADIEEGRIDPRVNPLKMSPHSLTCVTSSHWDRPYSREVAAFPLPFMKPEN
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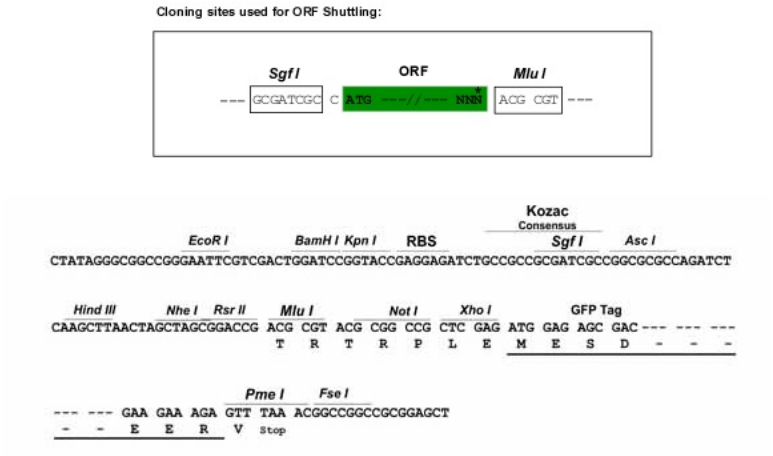
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000170

ORF Size: 3060 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.

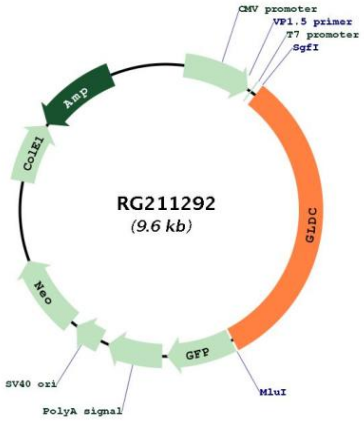
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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_000170.1, NP_000161.1
RefSeq Size:	3783 bp
RefSeq ORF:	3063 bp
Locus ID:	2731
UniProt ID:	P23378
Cytogenetics:	9p24.1
Domains:	GDC-P
Protein Families:	Druggable Genome
Protein Pathways:	Glycine, serine and threonine metabolism, Metabolic pathways
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 P protein, which binds to glycine and enables the methylamine group from glycine to be transferred to the T protein. Defects in this gene are a cause of nonketotic hyperglycinemia (NKH).[provided by RefSeq, Jan 2010]

Product images:



Circular map for RG211292