

Product datasheet for RC225159

HOGA1 (NM_001134670) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	HOGA1
Synonyms:	C10orf65; DHGPS2; DHGPS1; HP3; NPL2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence: >RC225159 representing NM_001134670
Red=Cloning site Blue=ORF Green=Tags(s)

TTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCTGGGTCCCCAAGTCTGGTCTTCTGTGAGGCAGGGGCTAAGCAGGAGCTTGTCCAGGAATGTGGGG
TCTGGGCTCAGGGGAGGGGAAGAAGTGGACATTGCGGGTATCTACCCCTGTGACCAACCCCTTCAC
TGCCACTGCAGAGTGGACTATGGGAACTGGAGGAGAATGACAACTGGGCACCTCCCTTCCGA
GGAGCTGTGGGGGCGTCTGCGCCCTGGCCAATGTCTGGGGGCTCAGGTGTGCCAGCTGGAGCGACTGT
GCTGCACGGGGCAATGGGAAGATGCCAGAACTGCAGCACCGCCTCATTGAGCCAAACGCTGCGGTGAC
CCGGCGCTTTGGGATCCAGGGCTGAAGAAATCATGGACTGGTTTGGCTACTATGGAGGCCCTGCCGC
GCCCCCTGCAGGAGCTGAGCCCGCTGAGGAGGAGGCACTGCGCATGGATTCACCAGCAACGGCTGGC
TC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC225159 representing NM_001134670
Red=Cloning site Green=Tags(s)

MLGPQVWSSVRQGLSRSLSRNVGVWASGEGKKVDIAGIYPPVTTPTATAEVDYGKLEENLHKLGTFFPR
GAVGGVCALANVLGAQVCQLERLCCTGQWEDAQKLQHLIEPNAVTRRFGIPGLKKIMDWFGYGGPCR
APLQELSPAEEELRMDFTSNGWL

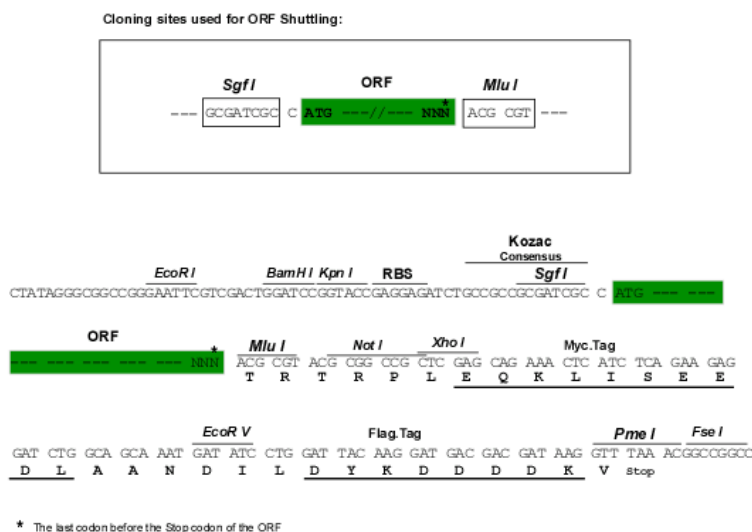
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja1434_f05.zip



Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001134670

ORF Size: 492 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 0.22µm filter is required.

RefSeq: NM_001134670.1, NP_001128142.1

RefSeq ORF: 495 bp

Locus ID: 112817

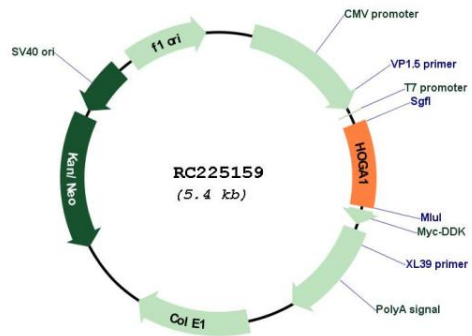
UniProt ID: [Q86XE5](#)

Cytogenetics: 10q24.2

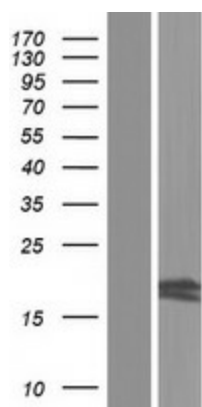
MW: 17.8 kDa

Gene Summary: The authors of PMID:20797690 cloned this gene while searching for genes in a region of chromosome 10 linked to primary hyperoxaluria type III. They noted that even though the encoded protein has been described as a mitochondrial dihydrodipicolinate synthase-like enzyme, it shares little homology with *E. coli* dihydrodipicolinate synthase (Dhdps), particularly in the putative substrate-binding region. Moreover, neither lysine biosynthesis nor sialic acid metabolism, for which Dhdps is responsible, occurs in vertebrate mitochondria. They propose that this gene encodes mitochondrial 4-hydroxyl-2-oxoglutarate aldolase (EC 4.1.3.16), which catalyzes the final step in the metabolic pathway of hydroxyproline, releasing glyoxylate and pyruvate. This gene is predominantly expressed in the liver and kidney, and mutations in this gene are found in patients with primary hyperoxaluria type III. Alternatively spliced transcript variants encoding different isoforms have been noted for this gene. [provided by RefSeq, Nov 2010]

Product images:



Circular map for RC225159



Western blot validation of overexpression lysate (Cat# [LY427474]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC225159 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).