

Product datasheet for RC223612

Haptoglobin (HP) (NM_005143) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Haptoglobin (HP) (NM_005143) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Haptoglobin
Synonyms:	BP; HP2ALPHA2; HPA1S
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC223612 representing NM_005143 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGTGCCTGGGAGCTGTCATTGCCCTCCTGCTCTGGGGACAGCTTTTGCAGTGGACTCAGGCAATG
ATGTCACGGATATCGCAGATGACGGCTGCCGAAGCCCCGAGATTGCACATGGCTATGTGGAGCACTC
GGTTTCGCTACAGTGTAAAGAACTACTACAACTGCGCACAGAAGGAGATGGAGTATACACCTAAATGAT
AAGAAGCAGTGGATAAAATAGGCTGTTGGAGATAAACTTCCTGAATGTGAAGCAGATGACGGCTGCCGA
AGCCCCCGAGATTGCACATGGCTATGTGGAGCACTCGGTTTCGCTACCAGTGTAAAGAACTACTACAACT
GCGCACAGAAGGAGATGGAGTGTACACCTTAAACAATGAGAAGCAGTGGATAAAATAGGCTGTTGGAGAT
AAACTTCCTGAATGTGAAGCAGTATGTGGGAAGCCCAAGAATCCGGCAAACCCAGTGCAGCGGATCCTGG
GTGGACACCTGGATGCCAAAGGCAGCTTCCCTGGCAGGCTAAGATGGTTTCCCACCATAATCTCACCAC
AGGTGCCACGCTGATCAATGAACAATGGCTGCTGACCACGGCTAAAAATCTTCTCCTGAACCATTAGAA
AATGCAACAGCGAAAGACATTGCCCTACTTTAACTCTATGTGGGGAAAAAGCAGCTTGTAGAGATTG
AGAAGTTGTTTACACCCTAACTACTCCAGGTAGATATTGGGCTCATCAAACCAAGAGGTTGTC
TGTTAATGAGAGAGTGTGCCATCTGCCTACCTTCAAAGGATTATGCAGAAGTAGGGCGTGTGGTTAT
GTTTCTGGCTGGGGCGAAATGCCAATTTAAATTTACTGACCATCTGAAGTATGTCATGCTGCCTGTGG
CTGACCAAGACCAATGCATAAGGCATTATGAAGGCAGCACAGTCCCCGAAAAGAAGACACCGAAGAGCCC
TGTAGGGTGCAGCCATACTGAATGAACACACCTTCTGTGCTGGCATGTCTAAGTACCAAGAAGACACC
TGCTATGGCGATGCGGGCAGTGCCTTTGCCGTTACGACCTGGAGGAGGACACCTGGTATGCGACTGGGA
TCTTAAGCTTTGATAAGAGCTGTGCTGTGGCTGAGTATGGTGTGTATGTGAAGGTGACTTCCATCCAGGA
CTGGGTTCCAGAAGACCATAGCTGAGAAC

ACGGTACGGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC223612 representing NM_005143
Red=Cloning site Green=Tags(s)

MSALGAVIALLLWGQLFAVDSGNDVTDIADDGCPKPPEIAHGYVEHSVRYQCKNYYKLRTEGDGVYTLND
 KKQWINKAVGDKLPECEADDGCPKPPEIAHGYVEHSVRYQCKNYYKLRTEGDGVYTLNNEKQWINKAVGD
 KLPECEAVCGKPKNPANPVQRILGGHLDAKGSFPWQAKMVSHHNLTTGATLINEQWLLTTAKNLFNLHSE
 NATAKDIAPTLTYVGGKQLVEIEKVVLPNYSQVDIGLIKQKQVSVNERVMPICLPSKDYAEVGRVGY
 VSGWGRNANFKFDHLKYVMLPVADQDQCI RHYEGSTVPEKKTTPKSPVGVQPILNEHTFCAGMSKYQEDT
 CYGDAGSAFAVHDL EEDTWYATGILSFDKSCAVAEYGVYVKVTSIQDWVQKTIAEN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6046_d03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_005143

ORF Size: 1218 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_005143.5](#)

RefSeq Size: 1433 bp

RefSeq ORF: 1221 bp

Locus ID: 3240

UniProt ID: [P00738](#)

Cytogenetics: 16q22.2

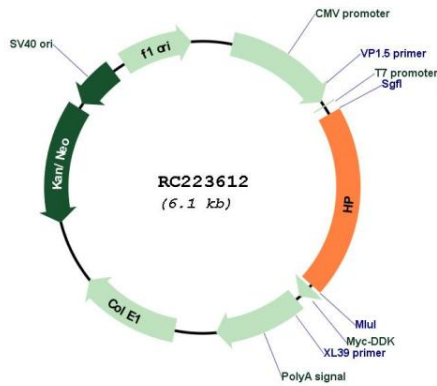
Domains: CCP, Tryp_SPc

Protein Families: Druggable Genome, Protease, Secreted Protein, Transmembrane

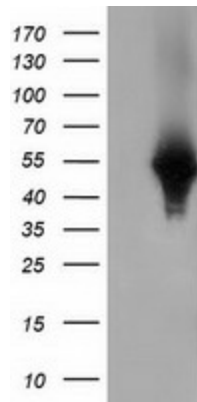
MW: 45.21 kDa

Gene Summary: This gene encodes a preproprotein, which is processed to yield both alpha and beta chains, which subsequently combine as a tetramer to produce haptoglobin. Haptoglobin functions to bind free plasma hemoglobin, which allows degradative enzymes to gain access to the hemoglobin, while at the same time preventing loss of iron through the kidneys and protecting the kidneys from damage by hemoglobin. Mutations in this gene and/or its regulatory regions cause ahaptoglobinemia or hypohaptoglobinemia. This gene has also been linked to diabetic nephropathy, the incidence of coronary artery disease in type 1 diabetes, Crohn's disease, inflammatory disease behavior, primary sclerosing cholangitis, susceptibility to idiopathic Parkinson's disease, and a reduced incidence of Plasmodium falciparum malaria. The protein encoded also exhibits antimicrobial activity against bacteria. A similar duplicated gene is located next to this gene on chromosome 16. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2014]

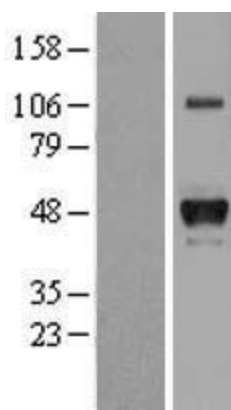
Product images:



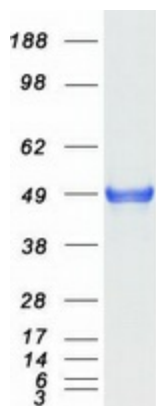
Circular map for RC223612



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY HP (Cat# RC223612, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-HP (Cat# [TA501699]). Positive lysates [LY401576] (100ug) and [LC401576] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401576]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223612 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HP protein (Cat# [TP323612]). The protein was produced from HEK293T cells transfected with HP cDNA clone (Cat# RC223612) using MegaTran 2.0 (Cat# [TT210002]).