

## Product datasheet for **RC203742**

### HBA2 (NM\_000517) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** HBA2 (NM\_000517) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** HBA2  
**Synonyms:** ECYT7; HBA-T2; HBH  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC203742 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGTGCTGTCTCCTGCCGACAAGACCAACGTCAAGGCCGCTGGGGTAAGGTCGGCGCGCACGCTGGCG  
AGTATGGTGCGGAGGCCCTGGAGAGGATGTTCTGTCTTCCCCACCACCAAGACCTACTCCCCGACTT  
CGACCTGAGCCACGGCTCTGCCAGGTTAAGGGCCACGGCAAGAAGGTGGCCGACGCGCTGACCAACGCC  
GTGGCGCACGTGGACGACATGCCAACGCGCTGTCCGCCCTGAGCGACCTGCACGCGCACAAGCTTCGGG  
TGGACCCGGTCAACTTCAAGCTCCTAAGCCACTGCCTGCTGGTGACCCTGGCCGCCACCTCCCCGCCGA  
GTTACCCCTGCGGTGCACGCCTCCCTGGACAAGTTCTGGCTTCTGTGAGCACCGTGTGACCTCCAAA  
TACCGT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC203742 protein sequence  
Red=Cloning site Green=Tags(s)

MVLSPADKTNVKAAGKVGAHAGEYGAELERMFLSFPTTKTYFPHFDLSHGSAQVKGHGKKVADALRNA  
VAHVDDMPNALSALSDLHAHKLRVDPVNFKLLSHCLLVTLAAHLPAEFTPAVHASLDKFLASVSTVLT  
YR

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

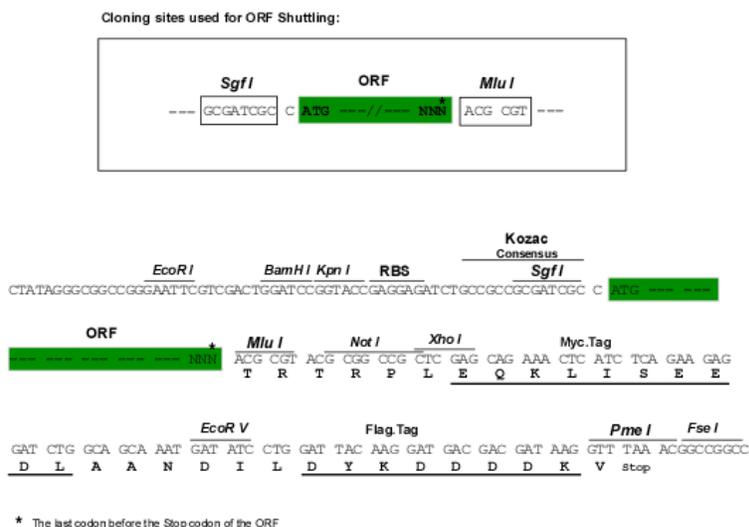
**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6301\\_c04.zip](https://cdn.origene.com/chromatograms/mk6301_c04.zip)



[View online »](#)

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_000517

ORF Size: 426 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\\_000517.6](#)

RefSeq Size: 622 bp

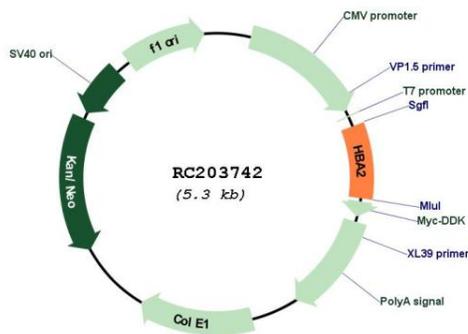
RefSeq ORF: 429 bp

Locus ID: 3040

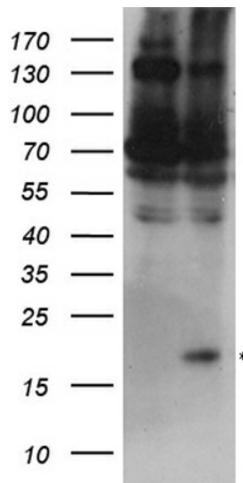
**UniProt ID:** [P69905](#)  
**Cytogenetics:** 16p13.3  
**Domains:** globin  
**MW:** 15.3 kDa

**Gene Summary:** The human alpha globin gene cluster located on chromosome 16 spans about 30 kb and includes seven loci: 5'- zeta - pseudozeta - mu - pseudoalpha-1 - alpha-2 - alpha-1 - theta - 3'. The alpha-2 (HBA2) and alpha-1 (HBA1) coding sequences are identical. These genes differ slightly over the 5' untranslated regions and the introns, but they differ significantly over the 3' untranslated regions. Two alpha chains plus two beta chains constitute HbA, which in normal adult life comprises about 97% of the total hemoglobin; alpha chains combine with delta chains to constitute HbA-2, which with HbF (fetal hemoglobin) makes up the remaining 3% of adult hemoglobin. Alpha thalassemias result from deletions of each of the alpha genes as well as deletions of both HBA2 and HBA1; some nondeletion alpha thalassemias have also been reported. [provided by RefSeq, Jul 2008]

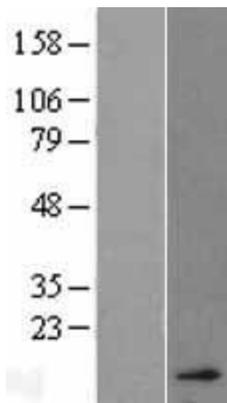
**Product images:**



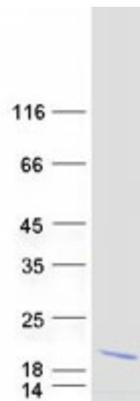
Circular map for RC203742



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY HBA2 (Cat# RC203742, 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-HBA2 rabbit polyclonal antibody (Cat# [TA890176]).



Western blot validation of overexpression lysate (Cat# [LY424675]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203742 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HBA2 protein (Cat# [TP303742]). The protein was produced from HEK293T cells transfected with HBA2 cDNA clone (Cat# RC203742) using MegaTran 2.0 (Cat# [TT210002]).