

## Product datasheet for RC204709

### Hemoglobin subunit gamma 2 (HBG2) (NM\_000184) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Hemoglobin subunit gamma 2 (HBG2) (NM\_000184) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Hemoglobin subunit gamma 2  
**Synonyms:** HBG-T1; TNCY  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC204709 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGTCATTTACAGAGGAGGACAAGGCTACTATCACAAAGCCTGTGGGGCAAGGTGAATGTGGAAGATG  
CTGGAGGAGAAACCCTGGGAAGGCTCCTGGTTGTCTACCCATGGACCCAGAGGTTCTTTGACAGCTTTGG  
CAACCTGTCTCTGCCTTGCCATCATGGGCAACCCCAAAGTCAAGGCACATGGCAAGAAGGTGCTGACT  
TCCTTGGGAGATGCCATAAAGCACCTGGATGATCTCAAGGGCACCTTTGCCAGCTGAGTGAAGTGCCT  
GTGACAAGCTGCATGTGGATCCTGAGAAGTCAAGCTCCTGGGAAATGTGCTGGTACCCTTTGGCAAT  
CCATTTTCGCAAAGAATTCACCCCTGAGGTGCAGGCTTCTGGCAGAAGATGGTACTGCAGTGGCCAGT  
GCCTGTCTCCAGATACCAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC204709 protein sequence  
Red=Cloning site Green=Tags(s)  
MGHFTTEEDKATITSLWGKYNVEDAGGETLGRLLVYYPWTRFFDSFGNLSASAIMGNPKVKAHGKLVLT  
SLGDAIKHLDDLKGTFAQLSELHCDKLHVDPENFKLLGNLVTVLAIHFGKEFTPEVQASWQKMVTAVAS  
ALSSRYH

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6438\\_b11.zip](https://cdn.origene.com/chromatograms/mk6438_b11.zip)



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**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000184

**ORF Size:** 441 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 0.22um filter is required.

**RefSeq:** [NM\\_000184.3](#)

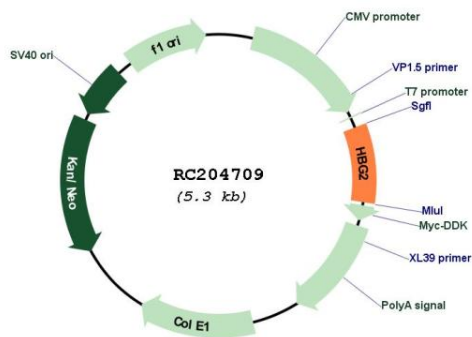
**RefSeq Size:** 583 bp

**RefSeq ORF:** 444 bp

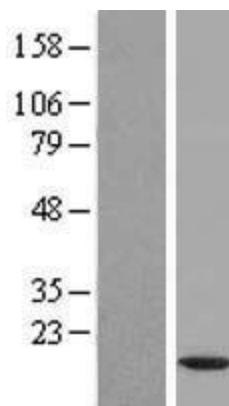
**Locus ID:** 3048  
**UniProt ID:** [P69892](#)  
**Cytogenetics:** 11p15.4  
**Domains:** globin  
**MW:** 16.1 kDa

**Gene Summary:** The gamma globin genes (HBG1 and HBG2) are normally expressed in the fetal liver, spleen and bone marrow. Two gamma chains together with two alpha chains constitute fetal hemoglobin (HbF) which is normally replaced by adult hemoglobin (HbA) at birth. In some beta-thalassemias and related conditions, gamma chain production continues into adulthood. The two types of gamma chains differ at residue 136 where glycine is found in the G-gamma product (HBG2) and alanine is found in the A-gamma product (HBG1). The former is predominant at birth. The order of the genes in the beta-globin cluster is: 5'- epsilon -- gamma-G -- gamma-A -- delta -- beta--3'. [provided by RefSeq, Jul 2008]

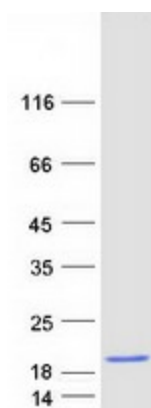
### Product images:



Circular map for RC204709



Western blot validation of overexpression lysate (Cat# [LY424880]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204709 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HBG2 protein (Cat# [TP304709]). The protein was produced from HEK293T cells transfected with HBG2 cDNA clone (Cat# RC204709) using MegaTran 2.0 (Cat# [TT210002]).