

## Product datasheet for **SC120038**

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

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hemoglobin subunit gamma 2 (HBG2) (NM_000184) Human Untagged Clone
Tag:	Tag Free
Symbol:	Hemoglobin subunit gamma 2
Synonyms:	HBG-T1; TNCY
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC120038 sequence for NM_000184 edited (data generated by NextGen Sequencing)

```
ATGGGTCATTTACAGAGGAGGACAAGGCTACTATCACAAAGCCTGTGGGCAAGGTGAAT
GTGGAAGATGCTGGAGGAGAAACCCTGGGAAGGCTCCTGGTTGTCTACCCATGGACCCAG
AGGTTCTTTGACAGCTTTGGCAACCTGTCTCTGCCTCTGCCATCATGGGCAACCCAAA
GTCAAGGCACATGGCAAGAAGGTGCTGACTTCCTTGGGAGATGCCATAAAGCACCTGGAT
GATCTCAAGGGCACCTTTGCCAGCTGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT
CCTGAGAACTTCAAGCTCCTGGGAAATGTGCTGGTACCCTTTTGGCAATCCATTTCCGGC
AAAGAATTCACCCCTGAGGTGCAGGCTTCTGGCAGAAGATGGTACTGGAGTGGCCAGT
GCCCTGCCTCCAGATACCACTGA
```

Clone variation with respect to NM\_000184.2

#### 5' Read Nucleotide Sequence:

```
>OriGene 5' read for NM_000184 unedited
GAAGCCTGGGTTCTTTACAGAGGAGGACAAGGCTACTATCACAAAGCCTGTGGGCAAGG
TGAATGTGGAAGATGCTGGAGGAGAAACCCTGGGAAAGGCTCCTGGTTGTCTACCCATGG
ACCCAGAGGTTCTTTGACAGCTTTGGCAACCTGTCTCTGCCTCTGCCATCATGGGCAAC
CCCAAAGTCAAGGCACATGGCAAGAAGGTGCTGACTTCCTTGGGAGATGCCATAAAGCAC
CTGGATGATCTCAAGGGACCTTTGCCAGCTGAGTGAAGTGAAGTGAAGTGAAGTGAAGT
GTGGATCCTGAGAACTTCAAGCTCCTGGGAAATGTGCTGGTACCCTTTTGGCAATCCAT
TTCCGGCAAAGAATTCACCCCTGAGGTGCAGGCTTCTGGCAGAAGATGGTACTGGAGTG
GCCAGTGCCCTGTCTCCAGATACCACTGAGCTCACTGCCATGATGCAGAGCTTTCAAG
GATAGGCTTTATCTGCAAGCAATCAAATAATAAATCTATTCTGCTAAGAGATCACAAAA
AAAAAAAAAAAAAAAAACTCGACTCTAGATTGCGGCCGCGGTCATAGCTGTTTCTGAACA
GATCCCGGGTGGCATCCCTGTGACCCCTCCCAAGTGCCTCTCCTGGCCCTGGAAGTTGCC
ACTCCAGTGCCCAACAGCCTTGTCTATAAAATTAAGTTGCATCATTTTGTCTGACTAGG
GTCTCTTCTATATATGGGTGAGGGGGGNGNGGNGNNTNNNNANNN
```



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<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_000184 unedited</p> <pre> NTTAGCTCTGGACCGCGGCCGCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTGGG ATCTCTTAGCAGAATAGATTTATTATTTGATTGCTTGCAGAAATAAGCCTATCCTTGAAA GCTCTGCATCATGGGCAGTGAGCTCAGTGGTATCTGGAGGACAGGGCACTGGCCACTCCA GTCACCATCTTCTGCCAGGAAGCCTGCACCTCAGGGGTGAATTCTTGCCGAAATGGATT GCCAAAACGGTCACCAGCACATTTCCAGGAGCTTGAAGTTCTCAGGATCCACATGCAGC TTGTACAGTGCAGTTCAGTCTCAGCTGGGCAAAGGTGCCCTTGAGATCATCCAGGTGCTTT ATGGCATCTCCAAGGAAGTCAGCACCTTCTTGCCATGTGCCCTTGAATTTGGGGTTGCC ATGATGGCAGAGGACAGAGGACAGGTTGCCAAAGCTGTCAAAGAACCCTCTGGGTCCATGGG TAGACAACCAGGAGCCTTCCAGGGTTTCTCCTCCAGCATCTCCACATTCACCTTGCCC CACAGGCTTGTGATAGTAGCCTTGTCTCCTCTGTGAAATGACCCATGGCGTCTGGACTA GGAGCTTATTGATAACCTCAGCCTCGTGCCGAATTCGCGGCCGCCCTATAGTGAGTCGTA TTACAAAATTCTGACGGTTCAGTAAACGAGCTCTGCTTATATAGACCTCCACCGTACAC GCCTACCGNCCATTTGCGTCAACGGGGCGGGTTATTACGACATTTGGAAAAGTNCGGTT GATTTTGGTGCCAAACAACTTCCATTGACGTCATGGGGTGGGAGACTGGAAAATCCCC GTGAGTCAAACCGCTATCCACGCCATTGGTGTACTGGCCAAACCGCATCACATGGTATT AGCGAGACTAATCCCTANATGTACTGCAGTNAGGAAGTCCCGC </pre>
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_000184
<b>Insert Size:</b>	620 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_000184.2</a> , <a href="#">NP_000175.1</a>
<b>RefSeq Size:</b>	583 bp
<b>RefSeq ORF:</b>	444 bp
<b>Locus ID:</b>	3048
<b>UniProt ID:</b>	<a href="#">P69892</a>
<b>Cytogenetics:</b>	11p15.4
<b>Domains:</b>	globin

**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]