

## Product datasheet for **RG204661**

### **BHMT2 (NM\_017614) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	BHMT2 (NM_017614) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	BHMT2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG204661 representing NM_017614 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCACCTGCTGGACGCCCGGGGGCCAAGAAGGGGATTTGGAGCGCCTGGAGAGTGGGGAGGTTGTGA  
TTGGAGATGGCAGCTTTCTACTCTGGAGAAGAGAGGCTATGTGAAGGCTGGGCTCTGGACTCCAGA  
GGCAGTGATAGAACCCAGACGCAGTTCGTCACCTTCACATGGAATCTTGAGAGCAGGATCAAATGTC  
ATGCAGACTTTTACTTTTCTGCCAGTGAGGACAATATGGAAAGCAAGTGGGAAGATGTAATGCTGCTG  
CCTGTGACCTCGCCAGGGAAGTGGCTGGCAAAGGTGATGCTTTGGTAGCAGGGGGGATCTGCCAGACATC  
AATATACAAATACCAGAAGGATGAAGCTAGAATTAATAAATTTTTTCGACAACAGCTAGAAGTTTTTGCC  
TGGAAAAATGTGGACTTCTTGATTGCAGAGTATTTTGGACAGCTTGAAGAAGCTGTGTGGCTGTGGAAG  
TCTTAAAAGAATCAGATAGACCCGTGGCAGTTACCATGTGCATAGGCCAGAGGGAGACATGCATGATAT  
AACCCCGGAGAAATGTGCTGTGAGGCTGGTGAAGGCAGGGGCTTCCATCGTTGGCGTGAAGTCCGCTTT  
GGGCCCGACACCAGCTTGAAGACGATGGAGCTCATGAAGGAGGGTCTTGGTGGCAGGGCTGAAAGCGC  
ACCTCATGGTGCAGCCTCTGGGTTCCACGCGCCTGACTGTGGCAAAGAGGGGTTTGTGGATCTCCAGAG  
ATATCCCTTTGGACTGGAGTCCAGAGTTGCCACCAGATGGGATATCAAAAATACGCCAGAGAGGCCTAC  
AACCTGGGGTCAAGTACATTGGCGGGTGTGTGGATTTGAGCCCTACCACATCAGGGCAATTGCAGAGG  
AGCTGGCCCCAGAAAGGGGCTTTTTGCCACCAGCTTCAAAAAACACGGCAGCTGGGGAAGTGGTTTGG  
CATGCACACCAAACCCTGGATTAGAGCAAGGGCTCGAAGGGAGTATTGGGAGAATCTGCTGCCAGCTTCA  
GGCAGACCTTTCTGCTCTCGCTGTCAAAGCCAGACTTC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG204661 representing NM\_017614  
Red=Cloning site Green=Tags(s)

MAPAGRPGAKKGILERLESGEVIVIGDGSFLITLEKRGYVKAGLWTPEAVIEHPDAVRQLHMEFLRAGSNV  
 MQTFTFSASEDNMESKWEDVNAACDLAREVAGKGDALVAGGICQTSIYKYQKDEARIKKLFRQQLEVFA  
 WKNVDFLIAEYFEHVVEAVWAVEVLKESDRPVAVTMCIGPEGDMHDITPGECAVRLVKAGASIVGVNCRF  
 GPDTSLKTMELMKEGLEWAGLKAHLMVQPLGFHAPDCGKEGFVDLPEYFPGLESRVATRWDIQKYAREAY  
 NLGVRYIGGCCGFEPYHIRAIAEELAPERGLPPASEKHGSGWGLDMHTKPWIRARARREYWENLLPAS  
 GRPFCPSLSKPDF

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



**ACCN:** NM\_017614

**ORF Size:** 1089 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\\_017614.5](#)

**RefSeq Size:** 2007 bp

**RefSeq ORF:** 1092 bp

**Locus ID:** 23743

**UniProt ID:** [Q9H2M3](#)

**Cytogenetics:** 5q14.1

**Domains:** S-methyl\_trans

**Gene Summary:** Homocysteine is a sulfur-containing amino acid that plays a crucial role in methylation reactions. Transfer of the methyl group from betaine to homocysteine creates methionine, which donates the methyl group to methylate DNA, proteins, lipids, and other intracellular metabolites. The protein encoded by this gene is one of two methyl transferases that can catalyze the transfer of the methyl group from betaine to homocysteine. Anomalies in homocysteine metabolism have been implicated in disorders ranging from vascular disease to neural tube birth defects such as spina bifida. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2010]

## Product images:



Circular map for RG204661