

Product datasheet for RC204661

BHMT2 (NM_017614) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BHMT2 (NM_017614) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BHMT2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204661 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGATCGCC

ATGGCACCTGCTGGACGCCCGGGGCAAGAAGGGGATTTGGAGCGCCTGGAGAGTGGGGAGGTTGTGA
TTGGAGATGGCAGCTTTCTACTCTGGAGAAGAGAGGCTATGTGAAGGCTGGGCTCTGGACTCCAGA
GGCAGTGATAGAACCAGACCCAGACGCGAGTTCGCACTTACATGGAATCCTTGAGAGCAGGATCAAATGTC
ATGCAGACTTTTACCTTTTCCAGTGAGGACAATATGAAAAGCAAGTGGGAAGATGAAATGCTGCTG
CCTGTGACTCGCCAGGGAAGTGGCTGGCAAAGGTGATGCTTTGGTAGCAGGGGGGATCTGCCAGACATC
AATATACAAATACCAGAAGGATGAAGCTAGAATTAATAAATTTTTTCGACAACAGCTAGAAGTTTTTGCC
TGGAAAAATGTGGACTTCTTGATTGCAGAGTATTTTGGACAGTGAAGAAGCTGTGTGGCTGTGGAAG
TCTTAAAAGAATCAGATAGACCCGTGGCAGTTACCATGTGCATAGGCCAGAGGGAGACATGCATGATAT
AACCCCGGAGAAATGTGCTGTGAGGCTGGTGAAGGCAGGGGCTTCCATCGTTGGCGTGAAGTCCGCTTT
GGGCCCGACACCAGCTTGAAGACGATGGAGCTCATGAAGGAGGGTCTTGGTGGCAGGGCTGAAAGCGC
ACCTCATGGTGCAGCCTCTGGGTTCCACGCGCCTGACTGTGGCAAAGAGGGGTTTGTGGATCTCCAGAG
ATATCCCTTTGGACTGGAGTCCAGAGTTGCCACCAGATGGGATATCAAAAATACGCCAGAGAGGCCTAC
AACCTGGGGGTCAGGTACATTGGCGGGTGTGTGGATTTGAGCCCTACCACATCAGGGCAATTGCAGAGG
AGCTGGCCCCAGAAAGGGGCTTTTTGCCACCAGCTTCAAAAAACACGGCAGCTGGGGAAGTGGTTTGG
CATGCACACCAAACCCTGGATTAGAGCAAGGGCTCGAAGGGAGTATTGGGAGAATCTGCTGCCAGCTTCA
GGCAGACCTTTCTGTCCTTCGCTGTCAAAGCCAGACTTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC204661 protein sequence
Red=Cloning site Green=Tags(s)

MAPAGRPGAKKGILERLESEGEVVI^{*}GDGSFLITLEKRGYVKAGLWTPEAVIEHPDAVRQLHMEFLRAGSNV
 MQTFTFSASEDNMESKWEDVNAAACDLAREVAGKGDALVAGGICQTSIYKYQKDEARIKKLFRQQLEVFA
 WKNVDFLIAEYFEHVVEAVWAVEVLKESDRPVAVTMCIGPEGDMHDITPGECAVRLVKAGASIVGVNCRF
 GPDTSLKTMELMKEGLEWAGLKAHLMVQPLGFHAPDCGKEGFVDLPEYPFGLSERVATRWDIQKYAREAY
 NLGVRYIGGCCGFEPYHIRAIAEELAPERGLPPASEKHGSGWGLDMHTKPWIRARARREYWENLLPAS
 GRPFCPSLSKPDF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6549_d08.zip

Restriction Sites: Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

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: 2651 bp

RefSeq ORF: 1092 bp

Locus ID: 23743

UniProt ID: [Q9H2M3](#)

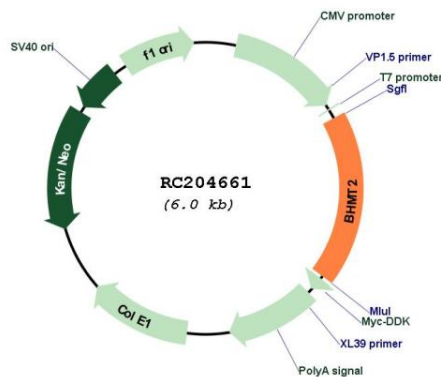
Cytogenetics: 5q14.1

Domains: S-methyl_trans

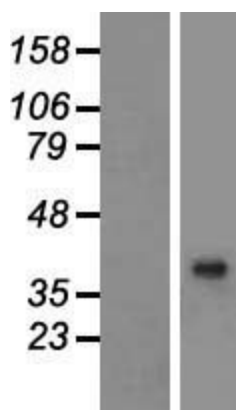
MW: 40.4 kDa

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]

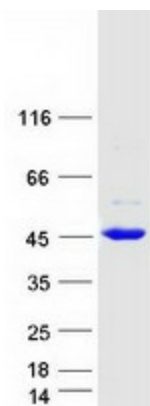
Product images:



Circular map for RC204661



Western blot validation of overexpression lysate (Cat# [LY413675]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204661 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified BHMT2 protein (Cat# [TP304661]). The protein was produced from HEK293T cells transfected with BHMT2 cDNA clone (Cat# RC204661) using MegaTran 2.0 (Cat# [TT210002]).