

Product datasheet for **RC220496**

BMT2 (NM_152556) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BMT2 (NM_152556) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BMT2
Synonyms:	C7orf60; SAMTOR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC220496 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**

ATGGAGCCAGGGCGCGGCCGAAATACTGCTCGTGCGCAGAGGGCGGGTCCCCGAACACTCCGCCG
CCCCGGAGCAGGAGCGGAACTGGAGCAGGAGAAGCTCTCCGGTGTGGTGAAGAGCGTCCACCGCGCGCT
CCGCAAGAAGTACCGAGAAGTGGGAGATTTTGATAAGATCTGGCAGAACACTGTGAGGATGAAGAACT
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GTCGTATTGAATGGTGTGTAGTGTATGCAGAGAATATTTCCAAATGGTGGGAAGAGAAAAGCACTTGA
GAAAGATGAAAAAGAGCTGTACTTGCCACTAAGACCACTCCAGCCTTAAATATGCATGAGTCTTCTCAA
CTTGAAGGTCATTTAACCAACCTCAGCTTTACAAACCTGAATTTATAACTGAGTTGCTACAAGCCTCAG
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CTGGAGAGCTTTCCATGTGGTTGTTTTCTCTCTCTCTTTCTTATTTTCCATCTCCTTACCAGCGATG
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GCTTCAAGTACTCAAAATTTTCACATATGCATCTGATGGCATTTAGGAAAATCTCTCTAAAAACCAAG
TGACTTGGTTAGTAGGAACACCCAGGAATGTTATATATTCCTCAAGATTTCAACAGTATAGAAGATGAG
GAATATTCTAACCTTCTGCTATGTTTCGATCAGATATAGAAGATGAACAACCTAGCATATGGTTTCACAG
AACTCCCTGATGCGCCATATGACTCAGATTCTGGAGAAAGTCAAGCCAGCTCTATTCCTTCTATGAGCT
AGAAGACCCCATATTACTTTTAAGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC220496 protein sequence
 Red=Cloning site Green=Tags(s)

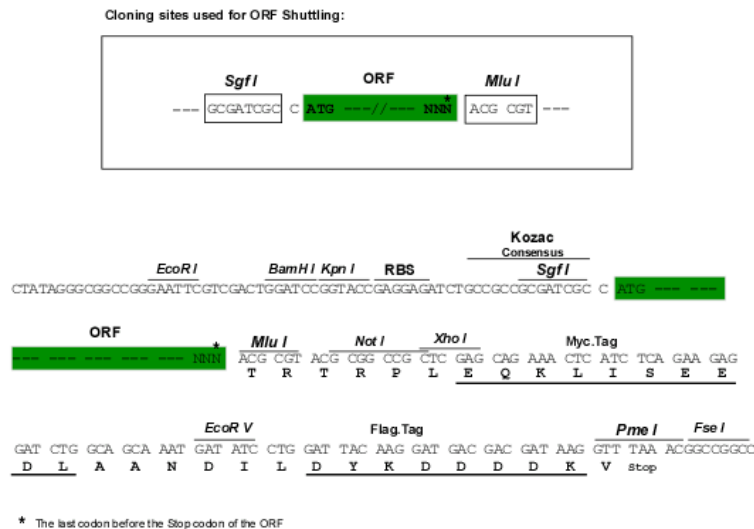
MEPGAGGRNTARAQRAGSPNTPPPQERKLEQEKLSGVVKSVMHRLRKKYREVGFDFKIWREHCEDEET
 LCEYAVAMKNLADNHWAKTCEGEGRIEWCCSVCREYFQNGGKRKALEKDEKRAVLATKTPALNMHESQ
 LEGHLTNLSFTNPEFITELLQASGKIRLLDVGSCFNPFLLKFEFLTVGIDIVPAVESVYKCDLNLQLQQ
 PLQLAQDAIDAFKQLKNPIDSLPGELFHVVFSLLLSYFSPYQWICCKKAHELLVLNGLLLIITPDS
 SHQNRHAMMMKSWKIAIESLGFKRFKYSKFSHMLMAFRKISLKTTSDDLVSRYNPGMLYIPQDFNSIEDE
 EYNSPCYVRSIDIEQLAYGFTELPDAPYDSDSGESQASSIPFYELEDPIILLLS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6445_c04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_152556

ORF Size: 1215 bp

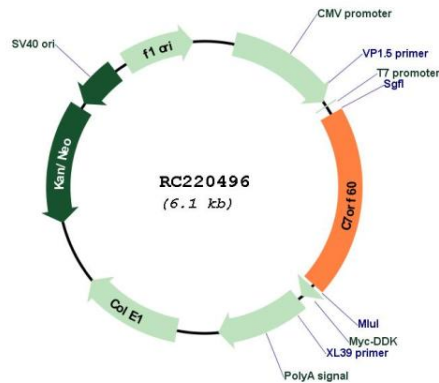
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

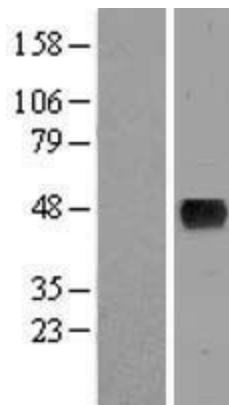
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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:	<u>NM_152556.3</u>
RefSeq Size:	3969 bp
RefSeq ORF:	1218 bp
Locus ID:	154743
UniProt ID:	<u>Q1RMZ1</u>
Cytogenetics:	7q31.1
MW:	46.3 kDa
Gene Summary:	S-adenosyl-L-methionine-binding protein that acts as an inhibitor of mTORC1 signaling via interaction with the GATOR1 and KICSTOR complexes (PubMed:29123071). Acts as a sensor of S-adenosyl-L-methionine to signal methionine sufficiency to mTORC1: in presence of methionine, binds S-adenosyl-L-methionine, leading to disrupt interaction with the GATOR1 and KICSTOR complexes and promote mTORC1 signaling (PubMed:29123071). Upon methionine starvation, S-adenosyl-L-methionine levels are reduced, thereby promoting the association with GATOR1 and KICSTOR, leading to inhibit mTORC1 signaling (PubMed:29123071). Probably also acts as a S-adenosyl-L-methionine-dependent methyltransferase (Potential).[UniProtKB/Swiss-Prot Function]

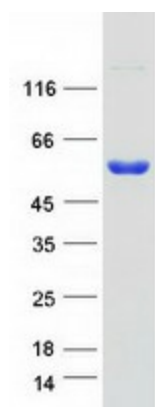
Product images:



Circular map for RC220496



Western blot validation of overexpression lysate (Cat# [LY407466]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220496 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified BMT2 protein (Cat# [TP320496]). The protein was produced from HEK293T cells transfected with BMT2 cDNA clone (Cat# RC220496) using MegaTran 2.0 (Cat# [TT210002]).