

Product datasheet for **RC400919**

BTK (NM_000061) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	BTK (NM_000061) Human Mutant ORF Clone
Mutation Description:	K466X
Affected Codon#:	466
Affected NT#:	1396
Nucleotide Mutation:	BTK Mutant (K466X), Myc-DDK-tagged ORF clone of Homo sapiens Bruton agammaglobulinemia tyrosine kinase (BTK) as transfection-ready DNA
Effect:	Ammlobulinemi
Symbol:	BTK
Synonyms:	AGMX1; AT; ATK; BPK; IGHD3; IMD1; PSCTK1; XLA
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_000061
ORF Size:	1395 bp
Restriction Sites:	Sgfl-MluI



[View online »](#)

ORF Nucleotide Sequence:

>RC400919 representing NM_000061
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCGCAGTGATTCTGGAGAGCATCTTTCTGAAGCGATCCCAACAGAAAAAGAAAACATCACCTCTAA
 ACTTCAAGAAGCGCCTGTTTCTTTGACCGTGCACAACTCTCCTACTATGAGTATGACTTTGAACGTGG
 GAGAAGAGGCAGTAAGAAGGGTTCAATAGATGTTGAGAAGATCACTTGTGTTGAAACAGTGGTTCCTGAA
 AAAAACTCTCTCCAGAAAGACAGATTCGAGAAGAGGTGAAGAGTCCAGTGAAATGGAGCAAATTTCAA
 TCATTGAAAGGTTCCCTTATCCCTTCCAGGTTGTATATGATGAAGGGCCTCTCTACGTCTTCTCCCAAC
 TGAAGAACTAAGGAAGCGGTGGATTACCAGCTCAAAAACGTAATCCGGTACAACAGTGATCTGGTTCAG
 AAATATCACCTTGCTTCTGGATCGATGGCAGTATCTCTGCTGCTCTCAGACAGCCAAAAATGCTATGG
 GCTGCCAAATTTGGAGAACAGGAATGGAAGCTTAAACCTGGGAGTTCTCACCGGAAGACAAAAAGCC
 TCTTCCCAACGCCTGAGGAGGACCAGATCTGAAAAAGCCACTACCGCTGAGCCAGCAGCAGCACCA
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 AGCTGCGGAAGGGTGATGAATATTTTATCTTGGAGGAAAGCAACTTACCATGGTGAGAGCACGAGATAA
 AAATGGGCAGGAAGGCTACATTCCTAGTAACTATGCTACTGAAGCAGAAGACTCCATAGAAATGTATGAG
 TGGTATTCAAACACATGACTCGGAGTCAGGCTGAGCAACTGCTAAAGCAAGAGGGGAAAGAAGGAGGTT
 TCATTGTCAGAGACTCCAGCAAAGCTGGCAAATATACAGTGTCTGTGTTTGTAAATCCACAGGGGACCC
 TCAAGGGGTGATACGTCATTATGTTGTGTGTTCCACACCTCAGAGCCAGTATTACCTGGCTGAGAAGCAC
 CTTTTCAGCACCATCCCTGAGCTCATTAACACCATCAGCACAACCTCTGCAGGACTCATATCCAGGCTCA
 AATATCCAGTGTCTCAACAAAACAAGAATGCACCTTCCACTGCAGGCCTGGGATACGGATCATGGGAAAT
 TGATCCAAAGGACCTGACCTTCTTGAAGGAGCTGGGGACTGGACAATTTGGGGTAGTGAAGTATGGGAAA
 TGGAGAGGCCAGTACGACGTGGCCATCAAGATGATCAAAGAAGGCTCCATGTCTGAAGATGAATTCATTG
 AAGAAGCCAAAGTCATGATGAATCTTCCCATGAGAAGCTGGTGCAGTTGTATGGCGTCTGCACC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGTTTAA

Protein Sequence:

>RC400919 representing NM_000061
 Red=Cloning site Green=Tags(s)

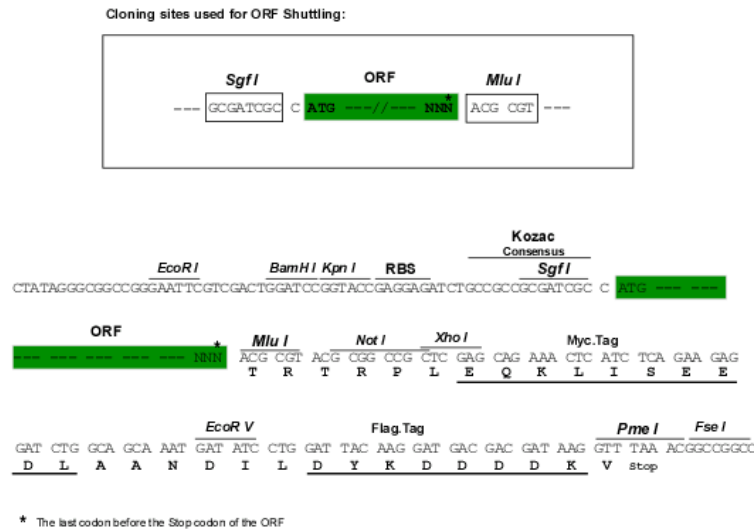
MAAVILESIFLKRSQQKKKTSPLNFKKRLFLLTVHKLSYYEYDFERGRRGSKKGSIDVEKITCVETVVPE
 KNPPPERQIPRRGEESSEMEQISIIERFPYPFQVVYDEGPLYVFSPTTELKRWIHQLKNVIRYNSDLVQ
 KYHPCFWIDGQYLCCSQTAKNAMGCQILENRNGSLKPGSSHRKTKKPLPPTPEEDQILKKLPPEPAAAP
 VSTSELKKVVALYDYPMPNANDLQLRKGEYFIEESNLPWWARDKNGQEGYIPSNYVTEAEDSIEMEY
 WYSKHMTRSQAELLKQEGKEGGFIVRDSSKAGKYTVSVFAKSTGDPQGVIRHYVVCSTPQSQYYLAEKH
 LFSTIPELINYQHNSAGLISRLKYPVSQQNKNAPSTAGLGYGSWEIDPKDLTFLKELGTGQFGVVKYKG
 WRGQYDVAIKMIKEGSMSEDEFIEEAKVMMNLSHEKLVQLYGVCT

SGPTRRRLE**QKLISEEDLAANDILDYKDDDDK**V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



OTI Disclaimer:

Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in *E. coli* are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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).

Note:

Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq:

[NP_000052](#)

RefSeq Size:

1395 bp

RefSeq ORF:

1980 bp

Locus ID:

695

Cytogenetics:

Xq22.1

Domains:

pkinase, SH2, TyrKc, SH3, BTK, PH, S_TKc

Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	B cell receptor signaling pathway, Fc epsilon RI signaling pathway, Primary immunodeficiency
MW:	51.2 kDa
Gene Summary:	The protein encoded by this gene plays a crucial role in B-cell development. Mutations in this gene cause X-linked agammaglobulinemia type 1, which is an immunodeficiency characterized by the failure to produce mature B lymphocytes, and associated with a failure of Ig heavy chain rearrangement. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Dec 2013]