

Product datasheet for **RC400991**

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:	W581X
Affected Codon#:	581
Affected NT#:	1743
Nucleotide Mutation:	BTK Mutant (W581X), 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:	1740 bp
Restriction Sites:	Sgfl-Mlul



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ORF Nucleotide Sequence:

>RC400991 representing NM_000061
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCCGCACTGATTCTGGAGAGCATCTTTCTGAAGCGATCCCAACAGAAAAAGAAAACATCACCTCTAA
 ACTTCAAGAAGCGCTGTTTCTTTGACCGTGCACAACTCTCCTACTATGAGTATGACTTTGAACGTGG
 GAGAAGAGGCAGTAAGAAGGTTCAATAGATGTTGAGAAGATCACTTGTGTTGAAACAGTGGTTCCTGAA
 AAAATCTCCTCCAGAAAGACAGATCCGAGAAGAGGTGAAGAGTCCAGTGAATGGAGCAAATTTCAA
 TCATTGAAAGGTTCCCTTATCCCTCCAGGTTGTATATGATGAAGGGCCTCTCTACGCTCTCTCCCAAC
 TGAAGAATAAGGAAGCGGTGGATTACCAGCTCAAAAACGTAATCCGGTACAACAGTATCTGGTTCAG
 AAATATCACCTTGTCTTCTGGATCGATGGCAGTATCTCTGCTCTCAGACAGCCAAAAATGCTATGG
 GCTGCCAAATTTGGAGAACAGGAATGGAAGCTTAAAACCTGGGAGTTCTCACCGAAGACAAAAAGCC
 TCTTCCCAACGCCTGAGGAGGACCAGATCTGAAAAAGCCACTACCGCTGAGCCAGCAGCAGCACCA
 GTCTCCACAAGTGAGCTGAAAAAGGTTGTGGCCCTTTATGATTACATGCCAATGAATGCAATGATCTAC
 AGCTGCGGAAGGGTATGAATATTTTATCTTGGAGGAAAGCAACTTACCATGGTGGAGAGCACGAGATAA
 AAATGGGACAGGAAGGCTACATTCCTAGTAACTATGCTACTGAAGCAGAAGACTCCATAGAAATGTATGAG
 TGGTATTCAAACACATGACTCGGAGTCAAGGCTGAGCAACTGCTAAAGCAAGAGGGGAAAGAAGGAGGTT
 TCATTGTCAGAGACTCCAGCAAAGCTGGCAAATATACAGTGTCTGTGTTGCTAAATCCACAGGGGACCC
 TCAAGGGGTGATACGTCATTATGTTGTGTGTTCCACACCTCAGAGCCAGTATTACCTGGCTGAGAAGCAC
 CTTTTCAGCACCATCCCTGAGCTCATTAACTACCATCAGCACAACCTGCAGGACTCATATCCAGGCTCA
 AATATCCAGTGTCTCAACAAAAAAGAATGCACCTTCCACTGCAGGCTGGGATACGGATCATGGGAAAT
 TGATCCAAAGGACCTGACCTTCTTGAAGGAGCTGGGGACTGGACAATTTGGGGTAGTGAAGTATGGGAAA
 TGGAGAGGCCAGTACGACGTGGCCATCAAGATGATCAAAGAAGGCTCCATGTCTGAAGATGAATTCATTG
 AAGAAGCCAAAGTCATGATGAATCTTTCCCATGAGAAGCTGGTGCAGTTGTATGGCGTCTGCACCAAGCA
 GCGCCCATCTTCATCATCACTGAGTACATGGCCAATGGCTGCCTCCTGAACTACCTGAGGGAGATGCGC
 CACCGCTTCCAGACTCAGCAGCTGCTAGAGATGTGAAGGATGTCTGTGAAGCCATGGAATACCTGGAGT
 CAAAGCAGTTCCTTACCAGACCTGGCAGCTCGAACTGTTGGTAAACGATCAAGGAGTTGTTAAAGT
 ATCTGATTTCCGCTGTCCAGGTATGCTCTGGATGATGAATACACAAGCTCAGTAGGCTCCAAATTTCCA
 GTCGGTGGTCCCACCGAAGTCTGATGTATAGCAAGTTCAGCAGCAAATCTGACATT

AG**GCGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

>RC400991 representing NM_000061
 Red=Cloning site Green=Tags(s)

MAAVILESIFLKRSQKKKTSPLNFKKRLFLLTVHKL SYEYDFERRRGSKKGSIDVEKITCVETVVP
 KNPPPERQIPRRGEESSEMEQISIIERFPYPFQVYVDEGPLYVFSPTTEELRKRWIHQ LKNVIRYNSDLVQ
 KYHPCFWIDGQYLCCSQ TAKNAMGCQILENRNGLKPGSSHRKTKKPLPPTPEEDQILKKPLPPEPAAAP
 VSTSELKKVVALYDYPMPNANDLQLRKGDEYF ILEESNLPWWRARDKNGQEGYIPSNYVTEAEDSIEMYE
 WYSKHMTRSQAELLLKQEGKEGGFIVRDSKAGKYTVSVFAKSTGDPQGVIRHYVVCSTPQSYYLAEKH
 LFSTIPELINYHQHNSAGLISRLKYPVVSQONKNAPSTAGLGYGSWEIDPKDLTFLKELGTGQFGVVKYK
 WRGQYDVAIKMIKEGSMSEDEFIEEAKVMMNL SHEKL VQLYGVCTKQRPIFIITEYMANGCLLNLYREMR
 HRFQTQQLLEMCKDVCEAMEYLESKQFLHRDLAARNCLVNDQGVVKSDFGLSRVYLDDEYTSVSGSKFP
 VRWSPPEVLMYSKFSKSDI

SGP**TRTRRLEQKLI**SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-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).
RefSeq:	<u>NP_000052</u>
RefSeq Size:	1740 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:	63.8 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]