

## Product datasheet for **RC400978**

### **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:	W563L
Affected Codon#:	563
Affected NT#:	1688
Nucleotide Mutation:	BTK Mutant (W563L), 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:	1977 bp
Restriction Sites:	Sgfl-Mlul



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ORF Nucleotide  
Sequence:

>RC400978 representing NM\_000061  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCGCAGTGATTCTGGAGAGCATCTTTCTGAAGCGATCCCAACAGAAAAAGAAAACATCACCTCTAA  
ACTTCAAGAAGCGCCTGTTTCTTTGACCGTGCACAACTCTCCTACTATGAGTATGACTTTGAACGTGG  
GAGAAGAGGCAGTAAGAAGGTTCAATAGATGTTGAGAAGATCACTTGTGTTGAAACAGTGGTTCCTGAA  
AAAAATCTCCTCCAGAAAGACAGATTCGAGAAGAGGTGAAGAGTCCAGTGAAATGGAGCAAATTTCAA  
TCATTGAAAGGTTCCCTTATCCCTTCCAGGTTGTATATGATGAAGGGCCTCTCTACGCTTCTCCCAAC  
TGAAGAATAAGGAAGCGGTGGATTACCAGCTCAAAAACGTAATCCGGTACAACAGTGATCTGGTTCAG  
AAATATCACCTTGCTTCTGGATCGATGGCAGTATCTCTGCTGCTCTCAGACAGCCAAAAATGCTATGG  
GCTGCCAAATTTGGAGAACAGGAATGGAAGCTTAAAACCTGGGAGTTCTCACCGGAAGCAAAAAAGCC  
TCTTCCCAACGCCTGAGGAGGACCAGATCTTAAAAAGCCACTACCGCTGAGCCAGCAGCAGCACCA  
GTCTCCACAAGTGAGCTGAAAAAGGTTGTGGCCCTTTATGATTACATGCCAATGAATGCAATGATCTAC  
AGCTGCGGAAGGGTGATGAATTTTTATCTTGGAGGAAAGCAACTTACCATGGTGGAGAGCACGAGATAA  
AAATGGGCAGGAAGGCTACATTCCTAGTAACTATGCTACTGAAGCAGAAGACTCCATAGAAAATGTATGAG  
TGGTATTCAAACACATGACTCGGAGTCAGGCTGAGCAACTGCTAAAGCAAGAGGGGAAAGAAGGAGGTT  
TCATTGTCAGAGACTCCAGCAAAGCTGGCAAATACAGTGTCTGTGTTGCTAAATCCACAGGGGACCC  
TCAAGGGGTGATACGTCATTATGTTGTGTGTTCCACACCTCAGAGCCAGTATTACCTGGCTGAGAAGCAC  
CTTTTCAGCACCATCCCTGAGCTCATTAACCTACCATCAGCACAACCTCTGCAGGACTCATATCCAGGCTCA  
AATATCCAGTGTCTCAACAAAAACAAGAATGCACCTTCCACTGCAGGCCCTGGGATACGGATCATGGGAAAT  
TGATCCAAAGGACCTGACCTTCTTGAAGGAGCTGGGGACTGGACAATTTGGGGTAGTGAAGTATGGGAAA  
TGGAGAGGCCAGTACGACGTGGCCATCAAGATGATCAAAGAAGGCTCCATGTCTGAAGATGAATTCATTG  
AAGAAGCCAAAGTCATGATGAATCTTTCCCATGAGAAGCTGGTGCAGTTGTATGGCGTCTGCACCAAGCA  
GCGCCCATCTTCATCATCACTGAGTACATGGCCAATGGCTGCCTCCTGAACTACCTGAGGGAGATGCGC  
CACCGCTTCCAGACTCAGCAGCTGCTAGAGATGTGCAAGGATGTCTGTGAAGCCATGGAATACCTGGAGT  
CAAAGCAGTTCCTTACCAGACCTGGCAGCTCGAACTGTTTGGTAAACGATCAAGGAGTTGTTAAAGT  
ATCTGATTTCCGCTGTCCAGGTATGTCTGGATGATGAATACACAAGCTCAGTAGGCTCCAAATTTCCA  
GTCCGGTGTCCCACCAGGATCCTGATGTATAGCAAGTTCAGCAGCAAATCTGACATTTGGGCTTTTG  
GGGTTTTGATGTGGGAAATTTACTCCCTGGGGAAGATGCCATATGAGAGATTTACTAACAGTGAGACTGC  
TGAACACATTGCCAAGGCTACGTCTCTACAGGCCTCATCTGGCTTCAGAGAAGGTATATACCATCATG  
TACAGTTGCTGGCATGAGAAAGCAGATGAGCGTCCCACTTTCAAATCTTCTGAGCAATATTCTAGATG  
TCATGGATGAAGAATCC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:** >RC400978 representing NM\_000061  
 Red=Cloning site Green=Tags(s)

MAAVILESIFLKRSQQKKKTSPLNFKKRLFLLTVHKLSYYEYDFERGRGSKKGSIDVEKITCVETVVPE  
 KNPPPERQIPRRGEESSEMEQISIIERFPYPFQVVYDEGPLYVFSPTEELRKRWIHQKKNVIRNSDLVQ  
 KYHPCFWIDGQYLCCSQTAKNAMGCQILENRNGLKPGSSHRKTKKPLPPTPEEDQILKKPLPPEPAAAP  
 VSTSELKKVVALYDYMPMNANDLQLRKGDEYF ILEESNLPWWRARDKNGQEGYIPSNYVTEAEDSIEMYE  
 WYSKHMTRSQAELLLKQEGKEGGFIVRDSSKAGKYTVSVFAKSTGDPQGVIRHYVVCSTPQSYYLAEKH  
 LFSTIPELINYHQHNSAGLISRLLKYPVSQQKNAPSTAGLGYGSWEIDPKDLTFLKELGTGQFGVVKYK  
 WRGQYDVAIKMIKEGSMSEDEFIEEAKVMMNLSHEKLVQLYGVCTKQRPFIITEYMANGCLLNLYREMR  
 HRFQTQQLLEMCKDVCEAMEYLESKQFLHRDLAARNCLVNDQGVVKSDFGLSRYVLDDEYTSVSGSKFP  
 VRLSPPEVLMYSKFSKSDIWAFGVLMWEIYSLGKMPYERFTNSETAEHIAQGLRLYRPHLASEKVVYTIM  
 YSCWHEKADERPTFKILLSNILDVMDEES

SGP TRRRLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NP_000052</a>
<b>RefSeq Size:</b>	1977 bp
<b>RefSeq ORF:</b>	1980 bp
<b>Locus ID:</b>	695
<b>Cytogenetics:</b>	Xq22.1
<b>Domains:</b>	pkinase, SH2, TyrKc, SH3, BTK, PH, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	B cell receptor signaling pathway, Fc epsilon RI signaling pathway, Primary immunodeficiency
<b>MW:</b>	72.5 kDa
<b>Gene Summary:</b>	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]