

Product datasheet for **RC401037**

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:	A622P
Affected Codon#:	622
Affected NT#:	1864
Nucleotide Mutation:	BTK Mutant (A622P), 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:

>RC401037 representing NM_000061
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGGATCGCC

ATGGCCGCAGTGATTCTGGAGAGCATCTTTCTGAAGCGATCCCAACAGAAAAAGAAAACATCACCTCTAA
ACTTCAAGAAGCGCCTGTTTCTTTGACCGTGCACAACTCTCCTACTATGAGTATGACTTTGAACGTGG
GAGAAGAGGCAGTAAGAAGGTTCAATAGATGTTGAGAAGATCACTTGTGTTGAAACAGTGGTTCCTGAA
AAAAATCTCCTCCAGAAAGACAGATTCGAGAAGAGGTGAAGAGTCCAGTGAATGGAGCAAATTTCAA
TCATTGAAAGGTTCCCTTATCCCTTCCAGGTTGTATATGATGAAGGGCCTCTCTACGCTTCTCCCAAC
TGAAGAATAAGGAAGCGGTGGATTACCAGCTCAAAAACGTAATCCGGTACAACAGTATCTGGTTCAG
AAATATCACCTTGTCTTGGATCGATGGCAGTATCTCTGCTGCTCAGACAGCCAAAAATGCTATGG
GCTGCCAAATTTGGAGAACAGGAATGGAAGCTTAAAACCTGGGAGTTCTCACCGGAAGCAAAAAAGCC
TCTTCCCAACGCCTGAGGAGGACCAGATCTTGA AAAAGCCACTACCGCCTGAGCCAGCAGCAGCACCA
GTCTCCACAAGTGAGCTGAAAAAGGTTGTGGCCCTTTATGATTACATGCCAATGAATGCAATGATCTAC
AGCTGCGGAAGGGTGATGAATTTTTATCTTGGAGGAAAGCAACTTACCATGGTGGAGAGCACGAGATAA
AAATGGGCAGGAAGGCTACATTCCTAGTAACTATGCTACTGAAGCAGAAGACTCCATAGAAAATGTATGAG
TGGTATTCCAAACACATGACTCGGAGTCAGGCTGAGCAACTGCTAAAGCAAGAGGGGAAAGAAGGAGGTT
TCATTGTCAGAGACTCCAGCAAAGCTGGCAAATACAGTGTCTGTGTTTGTAAATCCACAGGGGACCC
TCAAGGGGTGATACGTCAATATGTTGTGTGTTCCACACCTCAGAGCCAGTATTACCTGGCTGAGAAGCAC
CTTTTCAGCACCATCCCTGAGCTCATTAACCTACCATCAGCACAACCTCTGCAGGACTCATATCCAGGCTCA
AATATCCAGTGTCTCAACAAAAACAAGAATGCACCTTCCACTGCAGGCCCTGGGATACGGATCATGGGAAAT
TGATCCAAAGGACCTGACCTTCTTGAAGGAGCTGGGGACTGGACAATTTGGGGTAGTGAAGTATGGGAAA
TGGAGAGGCCAGTACGACGTGGCCATCAAGATGATCAAAGAAGGCTCCATGTCTGAAGATGAATTCATTG
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GCGCCCATCTTCATCATCACTGAGTACATGGCCAATGGCTGCCTCCTGAACTACCTGAGGGAGATGCGC
CACCGCTTCCAGACTCAGCAGCTGCTAGAGATGTGCAAGGATGTCTGTGAAGCCATGGAATACCTGGAGT
CAAAGCAGTTCCTTACCAGACCTGGCAGCTCGAACTGTTTGGTAAACGATCAAGGAGTTGTTAAAGT
ATCTGATTTCCGCTGTCCAGGTATGCTCTGGATGATGAATACACAAGCTCAGTAGGCTCCAAATTTCCA
GTCCGGTGGTCCCACCGAAGTCTGTATAGCAAGTTCAGCAGCAAATCTGACATTTGGGCTTTTG
GGGTTTTGATGTGGGAAATTTACTCCCTGGGGAAGATGCCATATGAGAGATTTACTAACAGTGAGACTGC
TGAACACATTGCCAAGGCTACGTCTCTACAGGCCTCATCTGCCTTCAGAGAAGGTATATACCATCATG
TACAGTTGCTGGCATGAGAAAGCAGATGAGCGTCCCACTTTCAAATTTCTCTGAGCAATATTCTAGATG
TCATGGATGAAGAATCC

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence: >RC401037 representing NM_000061
 Red=Cloning site Green=Tags(s)

MAAVILESIFLKRSQQKKKTSPLNFKKRLFLLTVHKLSYYEYDFERGRGSKKGSIDVEKITCVETVVPE
 KNPPPERQIPRRGEESSEMEQISIIERFPYPFQVYVDEGPLYVFSPTTEELRKRWIHQKLVYNSDLVQ
 KYHPCFWIDGQYLCCSQTAKNAMGCQILENRNGLKPGSSHRKTKKPLPPTPEEDQILKKPLPPEPAAAP
 VSTSELKKVVALYDYMPMNANDLQLRKGDEYF ILEESNLPWWRARDKNGQEGYIPSNYVTEAEDSIEMYE
 WYSKHMTRSQAELLKQEGKEGGFIVRDSSKAGKYTVSVFAKSTGDPQGVIRHYVVCSTPQSYYLAEKH
 LFSTIPELINYHQHNSAGLISRKYPVSQQNKAPSTAGLGYGSWEIDPKDLTFLKELGTGQFGVVKYK
 WRGQYDVAIKMIKEGSMSEDEFIEEAKVMMNLSHEKLVQLYGVCTKQRPFIITEYMANGCLLNLYREMR
 HRFQTQLLEMCKDVCEAMEYLESKQFLHRDLAARNCLVNDQGVVKSDFGLSRYVLDDEYTSVSGSKFP
 VRWSPPEVLMYSKFSKSDIWAFGVLMWEIYSLGKMPYERFTNSETAEHIAQGLRLYRPHLPSEKVVYTIM
 YSCWHEKADERPTFKILLSNILDVMDEES

SGPTRRRLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



OTI Disclaimer:	<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 custsupport@origene.com 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. More info</p>
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:	NP_000052
RefSeq Size:	1977 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:	72.5 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]