

Product datasheet for **MG208004**

Blk (NM_007549) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Blk (NM_007549) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Blk
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG208004 representing NM_007549
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGGCTGCTGAGCAGCAAGAGGCAGGTCAGTGAGAAGGGCAAGGGCTGGAGCCCCGTGAAGATCCGCA
 CCCAGGACAAGGCTCCCCACCCCTGCCACCCCTGGTTGTCTTCAACCACCTTGCCCCACCATCTCCTAA
 CCAGGACCAGATGAAGAGGAGCGTTTTGTGGTGGCTCTGTTTACTATGCCGCTGTGAATGACAGGGAC
 CTTCAGGTGCTGAAGGTGAGAAGCTCCAGGTCTTGAGGAGCACTGGAGACTGGTGGTTGGCCAGGTCAC
 TCGTCACAGGAAGAGAAGGTTATGTGCCAGCAACTTTGTGGCCCCAGTAGAGACTCTGGAAGTAGAAAA
 ATGTTCTTCAGGACCATCAGCCGAAGGATGCTGAGAGGCAGTTGCTGGCTCCGATGAACAAGGCCGGC
 TCCTTTCTCATCAGAGAGTGAAGCAATAAAGGTGCCTTTCCCTGTCCGTGAAAGATATCACCACCC
 AGGGGAGGTGGTCAAGCACTATAAGATCCGATCACTGGACAATGGAGGCTATTACATCTCCCCCGGAT
 CACCTTTCCACCCCTCCAGGCCCTGGTGCAGCACTATTCAAAGAAAGGGGATGGTTTGTGTCAGAAGTTG
 ACTCTGCCCTGTGTGAACCTGGCCCCGAAGAACCTTTGGGCCAAGATGAATGGGAAATCCCCAGGCAGT
 CTCTCAAGTTGGTCCGGAACCTGGGTCTGGGCAGTTGGCGAAGTCTGGATGGGTTATTACAAAAATAA
 CATGAAGGTGGCCATCAAGACCTGAAGGAGGGAACCATGTACCAGGAGCTTTCTGGCGAGGCCAAC
 GTGATGAAAACCTGCAGCATGAGAGGCTGGTTCGTCTACGCTGTGGTACCAGAGAGCCATTTACA
 TCGTCACTGAATACATGGCCAGAGGATGCTTGTGGATTTTCTGAAGACCGATGAAGGTAGCAGGTTGTC
 CCTTCCAAGGCTGATTGACATGTGAGCCAGGTTGAGAGGGGATGGCTTACATAGAGCGCATGAATTCC
 ATCCACCGTGACCTGCGGGCAGCCAACATCCTGGTGTCTGAGACGTTGTGCTGCAAAATCGCTGACTTCG
 GCTTGGCCAGGATCATTGACAGTGAATACACTGCCAAGAGGGGGCAAGTTCCCATCAAGTGGACCGC
 CCGGAGGCCATCCACTTCGGGGTGTACCATCAAGGCTGATGTGGTCCCTTCGGAGTCTTGCTGATG
 GAGATTGTACCTATGGGCGCTCCCTACCCAGGAATGAGCAACCTGAGGTATCCGTAGCCTGGAGC
 ACGGCTACCGAATGCCATGCCGGAGACATGTCCACCGGAGTTGTACAATGATATCATCACTGAGTGCTG
 GCGGGGCCGCGCAGAGGAGCGGCCTACCTTGTAGTTCTGCAGTCGGTGTGGAGGACTTCTACACAGCC
 ACGGAGGGCCAATATGAGCTGCAGCCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG208004 representing NM_007549
 Red=Cloning site Green=Tags(s)

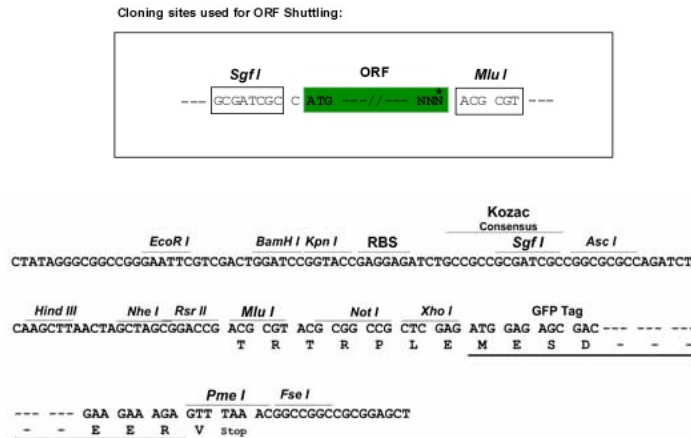
MGLLSSKRQVSEKKGWSPVKIRTQDKAPPLPPLVVFNLAPPSNQDPDEERFVVALFDYAAVNDRD
 LQVLKGEKLQVLRSTGDWWLARSLVTGREGYVPSNFVAPVETLEVEKWFRTISRKDAERQLLAPMKNKAG
 SFLIRESESNKGAFSLVKDITTTQGEVVKHYKIRSLDNGGYYISPRITFPTLQALVQHYSKKGDLQCQL
 TLPCVNLAPKNLWAQDEWEIPRQSLKLVKLGSGQFGEVWMMGYKNNMKVAIKTLKEGTMSPEAFLGEAN
 VMKTLQHERLVRLYAVVTREPIYIVTEYMARGCLLDLFLKTDEGSRLSLPRLIDMSAQVAEGMAYIERMNS
 IHRDLRAANILVSETLCKIADFLARIIDSEYTAQEGAKFPIKWTAPEAIHFGVFTIKADVWSFVLLM
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 TEGQYELQP

TRTRPLE - GFP Tag - V

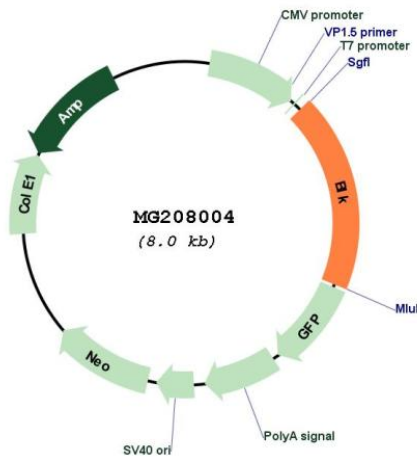
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_007549

ORF Size: 1497 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.

RefSeq: [NM_007549.2](#), [NP_031575.2](#)

RefSeq Size: 2475 bp

RefSeq ORF: 1500 bp

Locus ID: 12143

UniProt ID: [P16277](#)

Cytogenetics: 14 33.25 cM

Gene Summary: Non-receptor tyrosine kinase involved in B-lymphocyte development, differentiation and signaling. B-cell receptor (BCR) signaling requires a tight regulation of several protein tyrosine kinases and phosphatases, and associated coreceptors (PubMed:2404338, PubMed:7690139, PubMed:7608542, PubMed:9636152, PubMed:14662906, PubMed:12563261). Binding of antigen to the B-cell antigen receptor (BCR) triggers signaling that ultimately leads to B-cell activation (PubMed:2404338, PubMed:7690139, PubMed:7608542, PubMed:14662906, PubMed:12563261). Signaling through BLK plays an important role in transmitting signals through surface immunoglobulins and supports the pro-B to pre-B transition, as well as the signaling for growth arrest and apoptosis downstream of B-cell receptor (PubMed:2404338, PubMed:7690139, PubMed:7608542, PubMed:14662906, PubMed:12563261). Specifically binds and phosphorylates CD79A at 'Tyr-188' and 'Tyr-199', as well as CD79B at 'Tyr-196' and 'Tyr-207' (PubMed:7592958, PubMed:9177269). Phosphorylates also the immunoglobulin G receptor FCGR2 (By similarity). With FYN and LYN, plays an essential role in pre-B-cell receptor (pre-BCR)-mediated NF-kappa-B activation (PubMed:14662906, PubMed:12563261). Contributes also to BTK activation by indirectly stimulating BTK intramolecular autophosphorylation (PubMed:7565679). In pancreatic islets, acts as a modulator of beta-cells function through the up-regulation of PDX1 and NKX6-1 and consequent stimulation of insulin secretion in response to glucose (By similarity). Phosphorylates CGAS, promoting retention of CGAS in the cytosol (By similarity).[UniProtKB/Swiss-Prot Function]