

## Product datasheet for **MR208004**

### **Blk (NM\_007549) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Blk (NM_007549) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Blk
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR208004 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGGGCTGCTGAGCAGCAAGAGGCAGGTCAGTGAGAAGGGCAAGGGCTGGAGCCCCGTGAAGATCCGCA  
 CCCAGGACAAGGCTCCCCACCCCTGCCACCCCTGGTTGTCTTCAACCACCTTGCCCCACCATCTCCTAA  
 CCAGGACCAGATGAAGAGGAGCGTTTTGTGGTGGCTCTGTTTACTATGCCGCTGTGAATGACAGGGAC  
 CTTCAGGTGCTGAAGGGTGAAGACTCCAGGTCTTGAGGAGCACTGGAGACTGGTGGTTGGCCAGGTCAC  
 TCGTCACAGGAAGAGAAGGTTATGTGCCAGCAACTTTGTGGCCCCAGTAGAGACTCTGGAAGTAGAAAA  
 ATGTTCTTCAGGACCATCAGCCGGAAGGATGCTGAGAGGCAGTTGCTGGCTCCGATGAACAAGGCCGGC  
 TCCTTTCTCATCAGAGAGTGAAGCAATAAAGGTGCCTTTCCCTGTCCGTGAAAGATATCACCACCC  
 AGGGGAGGTGGTCAAGCACTATAAGATCCGATCACTGGACAATGGAGGCTATTACATCTCCCCCGGAT  
 CACCTTTCCACCCCTCCAGGCCCTGGTGCAGCACTATTCAAAGAAAGGGGATGGTTTGTGTCAGAAGTTG  
 ACTCTGCCCTGTGTGAACCTGGCCCCGAAGAACCTTTGGGCCAAGATGAATGGGAAATCCCCAGGCAGT  
 CTCTCAAGTTGGTCCGGAACCTTGGGTCTGGGCAGTTGGCGAAGTCTGGATGGGTTATTACAAAAATAA  
 CATGAAGGTGGCCATCAAGACCTGAAGGAGGGAACCATGTACCAGGAACTTCTCTGGCGAGGCCAAC  
 GTGATGAAAACCTGCAGCATGAGAGGCTGGTTCGTCTTACGCTGTGGTACCAGAGAGCCATTTACA  
 TCGTCACTGAATACATGGCCAGAGGATGCTTGTGGATTTCTGAAGACCGATGAAGGTAGCAGGTTGTC  
 CCTTCAAAGGCTGATTGACATGTGAGCCAGGTTGCAGAGGGGATGGCTTACATAGAGCGCATGAATTCC  
 ATCCACCGTGACCTGCGGGCAGCCAACATCCTGGTGTCTGAGACGTTGTGCTGCAAAATCGCTGACTTCG  
 GCTTGGCCAGGATCATTGACAGTGAATACACTGCCAAGAGGGGCAAGTTCCCATCAAGTGGACCGC  
 CCGGAGGCCATCCACTTCGGGGTGTTCACCATCAAGGCTGATGTGGTCCCTTCGGAGTCTTGCTGATG  
 GAGATTGTACCTATGGGCGCTTCCCTACCCAGGAATGAGCAACCCTGAGGTATCCGTAGCCTGGAGC  
 ACGGCTACCGAATGCCATGCCCGGAGACATGTCCACCGGAGTTGTACAATGATATCATCACTGAGTGCTG  
 GCGGGGCCGCCAGAGGAGCGGCCTACCTTGTAGTTCTCGAGTCGGTGTGGAGGACTTCTACACAGCC  
 ACGGAGGGCCAATATGAGCTGCAGCCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR208004 protein sequence  
 Red=Cloning site Green=Tags(s)

MGLLSSKRQVSEKKGWSPVKIRTQDKAPPLPPLVVFNHLAPPSNPQDPDEERFVVALFDYAAVNDRD  
 LQVLKGEKLQVLRSTGDWWLARS�VTGREGYVPSNFVAPVETLEVEKWFRTISRKDAERQLLAPMNKAG  
 SFLIRESESNKGAFSLVKDITQGEVVKHYKIRSLDNGGYYISPRITFPTLQALVQHYSKKGDLQCL  
 TLPCVNLAPKNLWAQDEWEIPRQSLKLVKLGSGQFGEVWMGYKNNMKVAIKTLKEGTMSPEAFLGEAN  
 VMKTLQHERLVRLYAVVTREPIYIVTEYMARGCLLDLKTDEGSRLSLPRLIDMSAQVAEGMAYIERMNS  
 IHRDLRAANILVSETLCKIADFLARIIDSEYTAQEGAKFPIKWTAPEAIFHGVTIKADVWSFGVLLM  
 EIVTYGRVPYPGMSNPEVIRSLEHGMRPCPETCPPELYNDIITECWRGRPEERPTFEFLQSVLEDFYTA  
 TEGQYELQP

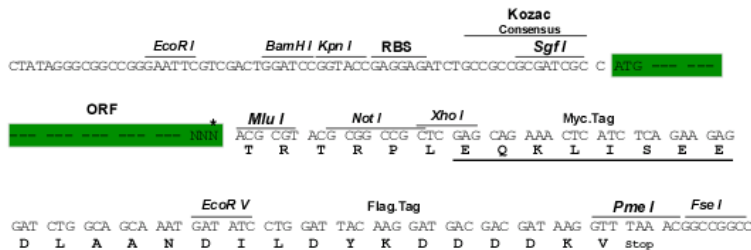
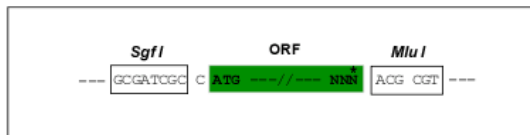
**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_007549

**ORF Size:** 1500 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

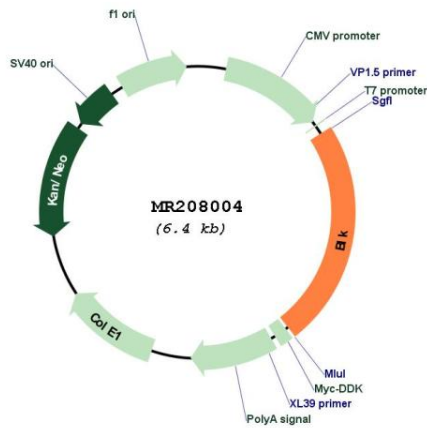
**Locus ID:** 12143

**UniProt ID:** [P16277](#)
**Cytogenetics:** 14 33.25 cM

**MW:** 56.7 kDa

**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]

**Product images:**



Circular map for MR208004