

# Product datasheet for MR222114

# Batf (NM\_016767) Mouse Tagged ORF Clone

## **Product data:**

#### OriGene Technologies, Inc.

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Product Type:	Expression Plasmids
Product Name:	Batf (NM_016767) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Batf
Synonyms:	B-ATF; SFA-2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR222114 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)
	TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCC <mark>GCGATCGC</mark> C
	ATGCCTCACAGCTCCGACAGCAGTGACTCCAGCTTCAGCCGCTCTCCTCCCCCCTGGCAAACAGGACTCAT CTGATGATGTGAGGAAAGTTCAGAGGAGGAGAGAAGAATCGCATCGCTGCCCAGAAGAGCCGACAGAGACA GACACAGAAAGCCGACACCCTTCACCTGGAGAGAGTGAGGACCTGGAGAAACAGAACGCAGCTCTCCGCAAA GAGATCAAACAGCTCACCGAGGAGCTCAAGTACTTCACATCAGTGCTGAGCAGCCACGAGCCCCTGTGCT CCGTGCTGGCCAGTGGCACCCCCTCGCCCCCGAGGTGGTATACAGTGCCCATGCCTTCCACCAGCCTCA CATCAGCTCGCCACGCTTCCAGCCC
	ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAG <b>GTTTAA</b>
Protein Sequence:	>MR222114 protein sequence <mark>Red</mark> =Cloning site Green=Tags(s)
	MPHSSDSSDSSFSRSPPPGKQDSSDDVRKVQRREKNRIAAQKSRQRQTQKADTLHLESEDLEKQNAALRK EIKQLTEELKYFTSVLSSHEPLCSVLASGTPSPPEVVYSAHAFHQPHISSPRFQP
	TRTRPLEQKLISEEDLAANDILDYKDDDDKV
<b>Restriction Sites:</b>	Sgfl-Mlul



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#### **Cloning Scheme:**



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

ACCN:	NM_016767
ORF Size:	375 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. <u>More info</u>
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:	<ol> <li>Centrifuge at 5,000xg for 5min.</li> <li>Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>Close the tube and incubate for 10 minutes at room temperature.</li> <li>Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM 016767.2, NP 058047.1</u>
RefSeq Size:	904 bp

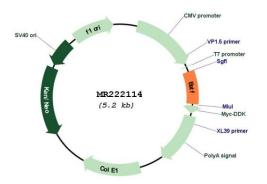
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	Batf (NM_016767) Mouse Tagged ORF Clone – MR222114	
RefSeq ORF:	378 bp	
Locus ID:	53314	
UniProt ID:	<u>035284</u>	
Cytogenetics:	12 D2	
MW:	14.1 kDa	

Gene Summary:

AP-1 family transcription factor that controls the differentiation of lineage-specific cells in the immune system: specifically mediates the differentiation of T-helper 17 cells (Th17), follicular T-helper cells (TfH), CD8(+) dendritic cells and class-switch recombination (CSR) in B-cells. Acts via the formation of a heterodimer with JUNB that recognizes and binds DNA sequence 5'-TGA[CG]TCA-3'. The BATF-JUNB heterodimer also forms a complex with IRF4 (or IRF8) in immune cells, leading to recognition of AICE sequence (5'-TGAnTCA/GAAA-3'), an immunespecific regulatory element, followed by cooperative binding of BATF and IRF4 (or IRF8) and activation of genes. Controls differentiation of T-helper cells producing interleukin-17 (Th17 cells) by binding to Th17-associated gene promoters: regulates expression of the transcription factor RORC itself and RORC target genes such as IL17 (IL17A or IL17B). Also involved in differentiation of follicular T-helper cells (TfH) by directing expression of BCL6 and MAF. In B-cells, involved in class-switch recombination (CSR) by controlling the expression of both AICDA and of germline transcripts of the intervening heavy-chain region and constant heavy-chain region (I(H)-C(H)). Following infection, can participate in CD8(+) dendritic cell differentiation via interaction with IRF4 and IRF8 to mediate cooperative gene activation. Regulates effector CD8(+) T-cell differentiation by regulating expression of SIRT1. Following DNA damage, part of a differentiation checkpoint that limits self-renewal of hematopoietic stem cells (HSCs): up-regulated by STAT3, leading to differentiation of HSCs, thereby restricting self-renewal of HSCs.[UniProtKB/Swiss-Prot Function]

## **Product images:**



Circular map for MR222114

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