

## Product datasheet for **MG222875**

### Lamp2 (NM\_010685) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Lamp2 (NM_010685) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Lamp2
Synonyms:	CD107b; Lamp-2; Lamp-2a; Lamp-2b; Lamp-2c; Lamp II; LGP-B; Mac3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG222875 representing NM_010685 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTGCCTCTCTCCGGTTAAAGGCGCAAAGCTCATCCTGATCTTTCTGTTCTAGGAGCCGTTTCAGTCCA  
ATGCATTGATAGTTAATTTGACAGATTCAAAGGACTTGCCTTTATGCAGAATGGGAGATGAATTTAC  
AATAACATATGAACTACAAACCAACCAATAAACTATAACCATTGCAGTACCTGACAAGGCGACACAC  
GATGGAAGCAGTTGTGGGATGACCGGAATAGTGCCAAAATAATGATACAATTTGGATTCGCTGTCTCTT  
GGGCTGTGAATTTACCAAGGAAGCATCTCATTATTCAATTCATGACATCGTCTTCTACAACACTAG  
TGATAGCACAGTATTTCCCTGGTGTGTAGCTAAAGGAGTTCATACTGTTAAAAATCCTGAGAATTTCAA  
GTTCCATTGGATGTCATCTTTAAGTGCAATAGTGTTTAACTTACAACCTGACTCCTGTCGTTTCAGAAAT  
ATTGGGGTATTCACCTGCAAGCTTTTGTCCAAAATGGTACAGTGAGTAAAAATGAACAAGTGTGTGAAGA  
AGACCAAACCTCCCACCACTGTGGCACCCATCATTACACCACTGCCCGTCGACTACAACACTCACTCACT  
CCAACCTCAACACCACTCCAACCTCCAACCTCCAACCTCCAACCTGGAACCTACAGCATTAGAAATGGCA  
ATACTACCTGTCTGTGGCTACCATGGGGCTGCAGCTGAACATCACTGAGGAGAAGTGCCTTTTCATTTT  
TAACATCAACCCCTGCCACAACCACTTCACCGGCAGCTGTCAACCTCAAAGTGTCAACTTAGGCTGAAC  
AACAGCCAAATTAAGTATCTTGACTTTTCTTTGCTGTGAAAAATGAAAAACGGTTCATCTGAAGGAAG  
TGAATGTCTACATGTATTTGGCTAATGGCTCAGCTTTCAACATTTCCAACAAGAACCTTAGCTTCTGGGA  
TGCCCTCTGGGAAGTTCTTATATGTGCAACAAAGAGCAGGTGCTTTCTGTGTCTAGAGCGTTTCAGATC  
AACACCTTTAACCTAAAGGTGCAACCTTTTAAATGTGACAAAAGGACAGTATTCTACAGCCAGGAGTGT  
CGCTGGATGATGACACCACTTCTAATACCAATTATAGTTGGTGTGGTCTTTCAGGCTTGATTATCGTTAT  
AGTGATTGCTTACCTAATTGGCAGAAGAAAGACCTATGCTGGATATCAGACTCTG

**ACGGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >MG222875 representing NM\_010685  
 Red=Cloning site Green=Tags(s)

MCLSPVKGAKLILIFLFLGAVQSNALIVNLTDSKGTCLYAEWEMNFTITYETTNTKNTITIAVPDKATH  
 DGSSCGDDRRNSAKIMIQQFQFAVSWAVNFTKEASHYSIHDIIVLSYNTSDSTVFPGAVAKGVHTVKNPENFK  
 VPLDVIKCNVLTYNLTPVVQKYWGIHLQAFVQNGTVSKNEQVCEEDQPTTTPVAPIIHTTAPSTTTTLT  
 PTSTPTPTPTPTPTVGNYSIRNGNTTCLLATMGLQLNITEEKVPIFNINPATTNFTGSCQPQSAQLRLN  
 NSQIKYLDIFIFAVKNEKRFYKLVNVMYLANGSAFNISNKNLSFWDAPLGSSYMCNKEQVLSVSRFAQI  
 NTFNLKVQPFNVTKGQYSTAQECSLDDDTILIPIIIVGAGLSGLIIVIVIAYLIGRRKTYAGYQTL

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_010685

**ORF Size:** 1245 bp

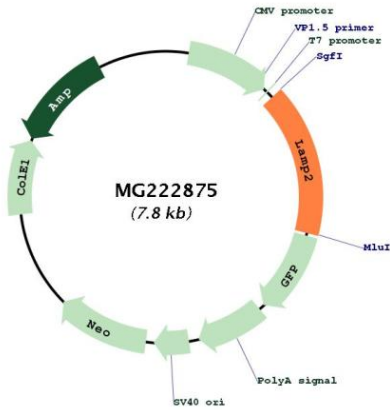
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

<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>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_010685.4, NP_034815.2</u>
<b>RefSeq Size:</b>	3603 bp
<b>RefSeq ORF:</b>	1248 bp
<b>Locus ID:</b>	16784
<b>UniProt ID:</b>	<u>P17047</u>
<b>Cytogenetics:</b>	X 22.67 cM
<b>Gene Summary:</b>	<p>Plays an important role in chaperone-mediated autophagy, a process that mediates lysosomal degradation of proteins in response to various stresses and as part of the normal turnover of proteins with a long biological half-life (PubMed:10972293). Functions by binding target proteins, such as GAPDH and MLLT11, and targeting them for lysosomal degradation (By similarity). Required for the fusion of autophagosomes with lysosomes during autophagy (PubMed:27628032). Cells that lack LAMP2 express normal levels of VAMP8, but fail to accumulate STX17 on autophagosomes, which is the most likely explanation for the lack of fusion between autophagosomes and lysosomes (PubMed:27628032). Required for normal degradation of the contents of autophagosomes (PubMed:10972293, PubMed:12221139). Plays a role in lysosomal protein degradation in response to starvation (PubMed:27628032). Required for efficient MHCII-mediated presentation of exogenous antigens via its function in lysosomal protein degradation; antigenic peptides generated by proteases in the endosomal/lysosomal compartment are captured by nascent MHCII subunits. Is not required for efficient MHCII-mediated presentation of endogenous antigens (By similarity). [UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MG222875