

## Product datasheet for MR227611

### Cd8a (NM\_009857) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cd8a (NM_009857) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cd8a
Synonyms:	BB154331; Ly-2; Ly-35; Ly-B; Lyt-2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR227611 representing NM_009857 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGATCGCC**

ATGGCCTCACCGTTGACCCGCTTCTGTGCTGAACCTGCTGCTGCTGGGTGAGTCGATTATCCTGGGGA  
GTGGAGAAGCTAAGCCACAGGCACCCGAATCCGAATCTTCCAAAGAAAATGGACGCCGAATTTGGTCA  
GAAGGTGGACCTGGTATGTGAAGTGTGGGGTCCGTTTCGAAGGATGCTCTTGGCTCTCCAGAACTCC  
AGCTCAAACCTCCCCAGCCACCTTCGTTGTCTATATGGCTTCATCCACAACAAGATAACGTGGGACG  
AGAAGCTGAATTCGTCGAACTGTTTTCTGCCATGAGGGACACGAATAATAAGTACGTTCTCACCTGAA  
CAAGTTCAGCAAGGAAAACGAAGGCTACTATTTCTGCTCAGTCATCAGCAACTCGGTGATGACTTCAGT  
TCTGTCGTGCCAGTCTTCAGAAAGTGAACCTACTACTACCAAGCCAGTGTGCGAACTCCCTCACCTG  
TGCACCTACCGGGACATCTCAGCCCCAGAGACCAGAAGATTGTCGGCCCCGTGGCTCAGTGAAGGGGAC  
CGGATTGGACTTCGCTGTGATTTACATCTGGGCACCCTTGGCCGGAATCTGCGTGGCCCTTCTGCTG  
TCCTTGATCATCACTCTCATCTGCTACACAGCCGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR227611 representing NM\_009857  
Red=Cloning site Green=Tags(s)

MASPLTRFLSLNLLLLGESIILGSGEAKPQAPELRIFPKKMDAELGQKVDLVCEVLGVSVSQGC SWL FQNS  
 SSKLPQPTFVVYMASSHNKITWDEKLNSSKLF SAMRDTNKNKYVL TLNKF SKENEGYFCSVISNSVMYFS  
 SVVPVLQKVNSTTTKPVLRTPSPVHPTGT SQPQRPEDCRPRGSVKGTGLDFACDIYIWAPLAGICVALLL  
 SLIITLICYSR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

**ACCN:** NM\_009857

**ORF Size:** 666 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\\_009857.1](#), [NP\\_033987.1](#)

**RefSeq Size:** 3099 bp

**RefSeq ORF:** 669 bp

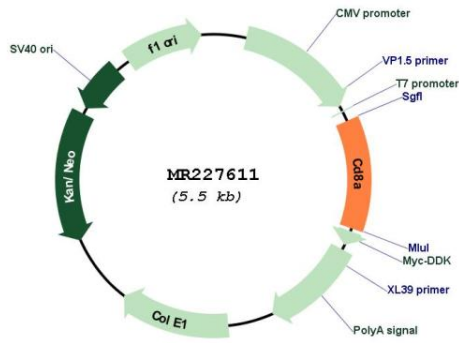
**Locus ID:** 12525

**Cytogenetics:** 6 32.14 cM

**MW:** 25 kDa

**Gene Summary:** Integral membrane glycoprotein that plays an essential role in the immune response and serves multiple functions in responses against both external and internal offenses. In T-cells, functions primarily as a coreceptor for MHC class I molecule:peptide complex. The antigens presented by class I peptides are derived from cytosolic proteins while class II derived from extracellular proteins. Interacts simultaneously with the T-cell receptor (TCR) and the MHC class I proteins presented by antigen presenting cells (APCs). In turn, recruits the Src kinase LCK to the vicinity of the TCR-CD3 complex. LCK then initiates different intracellular signaling pathways by phosphorylating various substrates ultimately leading to lymphokine production, motility, adhesion and activation of cytotoxic T-lymphocytes (CTLs). This mechanism enables CTLs to recognize and eliminate infected cells and tumor cells. In NK-cells, the presence of CD8A homodimers at the cell surface provides a survival mechanism allowing conjugation and lysis of multiple target cells. CD8A homodimer molecules also promote the survival and differentiation of activated lymphocytes into memory CD8 T-cells.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR227611