

Product datasheet for **MG202198**

Cd8a (BC030679) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Cd8a (BC030679) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Cd8a
Synonyms: BB154331; Ly-2; Ly-35; Ly-B; Lyt-2
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG202198 representing BC030679
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGACGCCGAACCTTGGTCAGAAGGTGGACCTGGTATGTGAAGTGTGGGGTCCGTTTCGCAAGGATGCT
CTTGGCTCTTCCAGAACCAGCTCCAACTCCCCAGCCACCTTCGTTGTCTATATGGCTTCATCCCA
CAACAAGATAACGTGGGACGAGAAGCTGAATTCGTCGAACTGTTTTCTGCCATGAGGGACAGAAAT
AAGTACGTTCTCACCTGAACAAGTTCAGCAAGGAAAACGAAGGCTACTATTTCTGCTCAGTCATCAGCA
ACTCGGTGATGTACTTCAGTTCTGTCGTGCCAGTCCTTCAGAAAGTGAAGTCTACTACTACCAAGCCAGT
GCTGCGAACTCCCTCACCTGTGCACCCTACCGGGACATCTCAGCCCCAGAGACCAGAAGATTGTCGGCCC
CGTGGCTCAGTGAAGGGACCGGATTGGACTTCGCTGTGATATTTACATCTGGGCACCCTTGGCCGGAA
TCTGCGTGGCCCTTCTGCTGTCTTGTATCATCACTCTCATCTGCTACCACAGGAGCCGAAAGCGTGT
CAAATGTCCCAGGCCGCTAGTCAGACAGGAAGCAAGCCAGACCTTCAGAGAAAATTGTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG202198 representing BC030679
Red=Cloning site Green=Tags(s)

MDAELGQKVDLVCEVLGSVSYQGCWLFQNSSSKLPQPTFVVYMASSHNKITWDEKLNSSKLSAMRDTNN
KYVLTLNKFSENEGYFCSVISNSVMYFSSVVPVLQKVNSTTTKPVLRTPSPVHPTGTSQPQRPEDCRP
RGSVKGTGLDFACDIYIWAPLAGICVALLLSLIITLICYHRSRKRKRVCKCPRPLVRQEGKPRPSEKIV

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI



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Cloning Scheme:


ACCN: BC030679

ORF Size: 621 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: [BC030679](#), [AAH30679](#)

RefSeq Size: 1452 bp

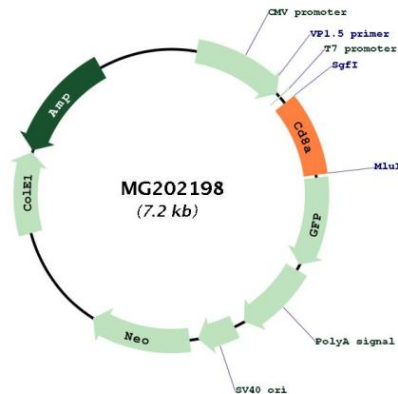
RefSeq ORF: 623 bp

Locus ID: 12525

Cytogenetics: 6 32.14 cM

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 MG202198