

Product datasheet for **MG227669**

Cd3e (NM_007648) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Cd3e (NM_007648) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Cd3e
Synonyms: A1504783; CD3; CD3epsilon; T3e
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG227669 representing NM_007648
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCGGTGGAACACTTTCTGGGGCATCCTGTGCCTCAGCCTCCTAGCTGTTGGCACTTGCCAGGACGATG
CCGAGAACATTGAATACAAAGTCTCCATCTCAGGAACAGTGTAGAGTTGACGTGCCCTCTAGACAGTGA
CGAGAACTTAAATGGGAAAAAATGGCCAAGAGCTGCCTCAGAAGCATGATAAGCACCTGGTGTCCAG
GATTTCTCGAAGTCGAGGACAGTGGCTACTACGTCGTACACACCAGCCTCAAATAAAAAACGTA
TGTACCTGAAAGCTCGAGTGTGTGAGTACTGTGTGGAGGTGGACCTGACAGCAGTAGCCATAATCATCAT
TGTTGACATCTGTATCACTCTGGGCTTGCTGATGGTCATTTACTGGAGCAAGAATAGGAAGGCCAAG
GCCAAGCCTGTGACCCGAGGAACCGGTGCTGGTAGCAGGCCAGAGGGCAAAACAAGGAGCGGCCACCAC
CTGTTCCCAACCCAGACTATGAGCCATCCGCAAAGGCCAGCGGGACCTGTATTCTGGCCTGAATCAGAG
AGCAGTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG227669 representing NM_007648
Red=Cloning site Green=Tags(s)

MRWNTFWGILCLSLAVGTCQDDAENIEYKVSISGTSVELTCPLDSDENLKWKNGQELPQKHKHLVLQ
DFSEVEDSGYYVCYTPASNKNTYLYLKARVCEYCEVDLTAVAIIIVDICITLGLLMVIYYWSKNRKA
AKPVTRGTGAGSRPRGQNKERPPVPNPDYEPPIRKGQRDLYSGLNQRAV

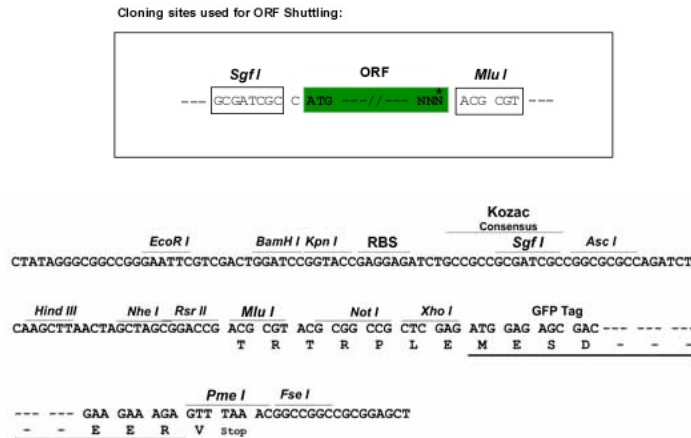
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

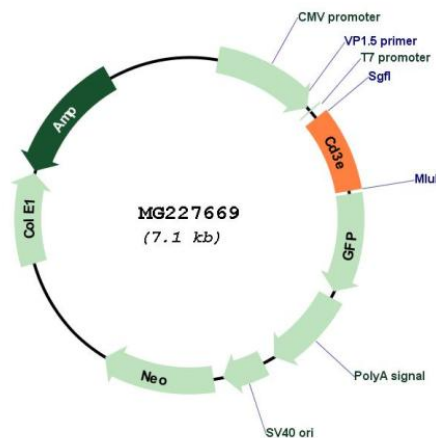


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Cloning Scheme:



Plasmid Map:



ACCN: NM_007648

ORF Size: 567 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_007648.5](#)

RefSeq Size: 1436 bp

RefSeq ORF: 570 bp

Locus ID: 12501

UniProt ID: [P22646](#)

Cytogenetics: 9 24.84 cM

Gene Summary: Part of the TCR-CD3 complex present on T-lymphocyte cell surface that plays an essential role in adaptive immune response. When antigen presenting cells (APCs) activate T-cell receptor (TCR), TCR-mediated signals are transmitted across the cell membrane by the CD3 chains CD3D, CD3E, CD3G and CD3Z. All CD3 chains contain immunoreceptor tyrosine-based activation motifs (ITAMs) in their cytoplasmic domain. Upon TCR engagement, these motifs become phosphorylated by Src family protein tyrosine kinases LCK and FYN, resulting in the activation of downstream signaling pathways. In addition of this role of signal transduction in T-cell activation, CD3E plays an essential role in correct T-cell development (PubMed:19956738, PubMed:24899501). Participates also in internalization and cell surface down-regulation of TCR-CD3 complexes via endocytosis sequences present in CD3E cytosolic region.[UniProtKB/Swiss-Prot Function]