

## Product datasheet for **SC324866**

### MLKL (NM\_001142497) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MLKL (NM_001142497) Human Untagged Clone
Tag:	Tag Free
Symbol:	MLKL
Synonyms:	hMLKL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC324866 representing NM_001142497. Blue=Insert sequence Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTGTAAACGACTACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGAAAATTTGAAGCATATTATCACCCCTGGCCAGGTCATCCACAAACGGTGTGAAGAGATGAAATAC
TGCAAGAAACAGTGCCGGCGCCTGGGCCACCGCTCCTCGGCCTGATCAAGCCTCTGGAGATGCTCCAG
GACCAAGGAAAGAGGAGCGTGCCCTCTGAGAAGTTAACCACAGCCATGAACCGCTTCAAGGCTGCCCTG
GAGGAGGCTAATGGGGAGATAGAAAAGTTCAGCAATAGATCCAATATCTGCAGGTTTCTAACAGCAAGC
CAGGACAAAATACTCTTCAAGGACGTGAACAGGAAGCTGAGTGATGTCTGGAAGGAGCTCTCGCTGTTA
CTTCAGGTTGAGCAACGCATGCCTGTTTACCCATAAGCCAAGGAGCGTCTGGGCACAGGAAGATCAG
CAGGATGCAGACGAAGACAGGCGAGCTTCCAGATGCTAAGAAGAGATAATGAAAAAATAGAAGCTTCA
CTGAGACGATTAGAAATCAACATGAAAGAAATCAAGGAACTTTGAGGCAGTCTTTGGAATCGTCTCT
GGGAAATCGCCACTGGAGATATCCCGTTTCAAGGTGAAGAATGTGAAGACTGGCTCAGCCAGTGGCTGT
AATTCTGAGAAGATCCGCAAGCTGGTGGCTGTGAAGCGGCAGCAGGAGCCACTGGGTGAAGACTGCCCT
TCAGAGCTGCGGGAGATCATTGATGAGTGCCGGGCCATGATCCCTCTGTGCGGCCCTCTGTGGATGAA
ATCTTAAAGAACTCTCCACCTTTCTAAGTAG
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGCGC
```

Restriction Sites:	Sgfl-MluI
ACCN:	NM_001142497
Insert Size:	792 bp



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**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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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\\_001142497.2](#)

**RefSeq Size:** 2155 bp

**RefSeq ORF:** 792 bp

**Locus ID:** 197259

**UniProt ID:** [Q8NB16](#)

**Cytogenetics:** 16q23.1

**Protein Families:** Druggable Genome, Protein Kinase

**MW:** 30.3 kDa

**Gene Summary:**

This gene belongs to the protein kinase superfamily. The encoded protein contains a protein kinase-like domain; however, is thought to be inactive because it lacks several residues required for activity. This protein plays a critical role in tumor necrosis factor (TNF)-induced necroptosis, a programmed cell death process, via interaction with receptor-interacting protein 3 (RIP3), which is a key signaling molecule in necroptosis pathway. Inhibitor studies and knockdown of this gene inhibited TNF-induced necrosis. High levels of this protein and RIP3 are associated with inflammatory bowel disease in children. Alternatively spliced transcript variants have been described for this gene. [provided by RefSeq, Sep 2015]

Transcript Variant: This variant (2, also known as MLKLshRNA-B) lacks several consecutive exons in the mid region and uses an alternate donor splice site at the next exon, which causes a localized frameshift compared to variant 1. The resulting isoform (2) has the same N- and C-termini but is shorter, lacking an internal protein segment compared to isoform 1.