

## Product datasheet for **MG221657**

### **Klc1 (NM\_001081959) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Klc1 (NM_001081959) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Klc1
Synonyms:	A1874768; Kn; Kns2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG221657 representing NM\_001081959  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTATGACAACATGTCCACCATGGTGTACATAAAGGAAGAGAAGCTGGAGAAGCTCACGCAGGATGAGA  
 TCATCTCTAAGACCAAGCAAGTATCCAGGGGCTGGAAGCCCTGAAGAATGAGCACAACTCCATCCCTGCA  
 GAGTTTGTCTGGAGACGCTGAAGTCTTGAAGAAGGATGACGAGAGCAACCTGGTGGAAAGAAAATCCAGC  
 ATGATCCGCAAGTCCCTGGAGATGCTGGAGCTTGGCCTGAGCGAGGCGCAGGTGATGATGGCGCTGTCCA  
 ATCACCTGAATGCTGTGGAGTCCGAGAAGCAAAAGCTCCGCGCTCAGTTTCGACGGCTGTGCCAGGAGAA  
 CCAGTGGCTGCGGGATGAGCTGGCCAACACGCAGCAGAAGTTGCAGAAGAGCGAGCAGTCGGTGGCGCAG  
 CTGGAGGAGGAGAAGAAACCTGGAGTTCATGAACCAGCTGAAGAAGTACGACGACGACATCTCCCCT  
 CGGAGGACAAAGACTCTGATTCTTCAAAGAGCCGTTGGATGATCTCTTCCAAAATGACGAGGACGAACC  
 AGGACAAGGAATCCAGCAGCAGCACAGTAGTGCTGCGGCCGCCAGCAGGGCGGCTACGAGATCCCT  
 GCAAGGCTGCGCAGCTCCACAACCTGGTATCCAGTATGCTTACAGGGGCGTTACGAGGTGGCGGTGC  
 CACTCTGCAAGCAGGCCCTGGAGGATCTGGAGAAGACTTCCGGCCACGACCACCCCGATGTGGCTACCAT  
 GCTCAACATCTTGGCCCTGGTGTACAGGATCAGAAACAAGTATAAAGATGCAGCTAACCTCCTGAACGAC  
 GCCCTGGCTATCCGCGAGAAAACCTGGGCAGAGATCACCCCGCGGTGGCAGGACTCTGAACAACCTAG  
 CAGTACTGTACGGTAAGCGAGGGAAGTACAAGGAGGCGGAGCCGCTGTGTAACGAGCCCTGGAGATCAG  
 GGAGAAGTCTGGGAAAGGATCATCTGATGTTGCCAAACAGTTAAATAACCTGGCCCTGCTGTGCCAG  
 AACCAAGGCAAGTACGAGGAGGTGGAGTATTATTACCAGAGGGCCCTGGGCATCTACCAGACGAAGTGG  
 GGCCCGACGATCCCAACGTGGCCAAGACCAAGAACAACCTGGCCCTCTGTTATCTGAAACAAGGGAAGTT  
 CAAGCAGCAGAAACGCTGTACAAGGAGATTCTACCCGCGCACACGAGCGGGAGTTGGATCTGTGGAC  
 GACGAGAACAAGCCATCTGGATGCACGCTGAAGAGAGAGAGGAGTGCAAGGCAAGCAGAAGGACGGGT  
 CGGCTTTTGGAGAGTATGGCGGCTGGTATAAAGCCTGCAAAGTGGACAGTCCCACCGTCACAACCACCTT  
 GAAAAACCTTGGAGCACTTACCAGCGCAGGGGAAGTTTGAAGCTGCAGAGACATTGGAAGAAGCCGCC  
 ATGAGGTCACGTAAGCAGAGAGTGGCTGAAGTGTAAATGACCCTGAGAGCATGGAGAAGCGGAGGAGCC  
 GGGAGAGTCTCAATATGGACGTGGTCAAGTACGAGAGTGGCCCTGACGGAGGGGAGGAAGTGAATGAG  
 CGTAGAGTGAATGGGGATGGCACTGGATCTTTAAAGCGCAGTGGCTCCTTTAGCAAACCTCCGGCTTCC  
 ATTAGACGACGAGTGAAGCTGGTTAGGAAGCTGAAGGGAGGAAGCTCACGGGACAGTGAAGCGAGGA  
 ACCCTGGGGCATCCCCGACAGCCTCTTGTGTGAAAAACGACAGCAGCAGCCTAGAAGACGCTAGCAC  
 TAAC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG221657 representing NM\_001081959  
 Red=Cloning site Green=Tags(s)

MYDNMSTMVYIKEEKLEKLTQDEIISKTKQVIQGLEALKNEHNSILQSLLETCLKLKKDDENLVEEKSS  
 MIRKSLEMLELGLSEAQVMMALSNHLNAVESEKQKLRAQVRRQCENQWLRDELANTQQKLQKSEQSVAQ  
 LEEEEKHLEFMNQLKKYDDDISPSEDKSDSSKEPLDDLFPNDEDEPGQGIQQQHSSAAAAAQGGYEIP  
 ARLRTLHNLVIQYASQGRYEVAVPLCKQALEDLKTSGHDPDVATMLNILALVYRDQNKYKDAANLLND  
 ALAIREKTLGRDHPAVAATLNNLAVLYGKRGKYKEAEPLCKRALEIREKVLGKDHPDVAKQLNNLALLCQ  
 NQKGYEEVEYYYQRALGIYQTKLGPDDPNVAKTKNNLASCYLKQKFKQAETLYKEILTRAHEREFGSVD  
 DENKPIWMHAEERECECKGKQKDGSAFGEYGGWYACKVDSPTVTTLKNL GALYRRQGKFEAAETLEEA  
 MRSRKQRYAEVLNDPESMEKRRSRESL NMDVVKYESGPDGGEEVSMSVEWNGDGTGSLKRGSFSKLRAS  
 IRRSSEKLVRLKKGSSRDSEPRNPGASPAEPLCVENDSSSLEDASTN

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001081959

**ORF Size:** 1824 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\\_001081959.1](#), [NP\\_001075428.1](#)

**RefSeq Size:** 2480 bp

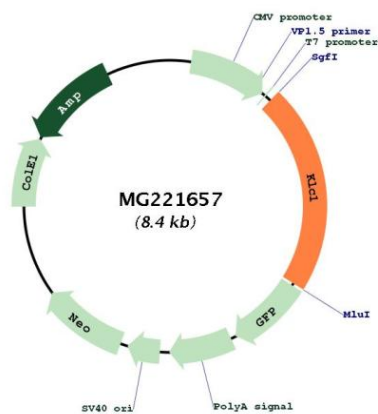
**RefSeq ORF:** 1827 bp

**Locus ID:** 16593

**Cytogenetics:** 12 61.13 cM

**Gene Summary:**

Conventional kinesin is a tetrameric molecule composed of two heavy chains and two light chains, and transports various cargos along microtubules toward their plus ends. The heavy chains provide the motor activity, while the light chains bind to various cargos. This gene encodes a member of the kinesin light chain family. It associates with kinesin heavy chain through an N-terminal domain, and six tetratricopeptide repeat (TPR) motifs are thought to be involved in binding of cargos such as vesicles, mitochondria, and the Golgi complex. Thus, kinesin light chains function as adapter molecules and not motors per se. Although previously named "kinesin 2", this gene is not a member of the kinesin-2 / kinesin heavy chain subfamily of kinesin motor proteins. Extensive alternative splicing produces isoforms with different C-termini that are proposed to bind to different cargos; however, the full-length nature of some of these variants has not been determined. [provided by RefSeq, Jul 2008]

**Product images:**

Circular map for MG221657