

Product datasheet for **RG226028**

KLC1 (NM_001130107) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | KLC1 (NM_001130107) Human Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | KLC1 |
| Synonyms: | KLC; KNS2; KNS2A |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |



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ORF Nucleotide Sequence:

>RG226028 representing NM_001130107
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTATGACAACATGTCCACAATGGTGTACATAAAGGAAGACAAGTTGGAGAAGCTTACACAGGATGAAA
 TTATTTCTAAGACAAAGCAAGTAATTCAGGGGCTGGAAGCTTTGAAGAATGAGCACAAATTCATTTTACA
 AAGTTTGTCTGGAGACACTGAAGTGGTGAAGAAAGATGATGAAAGTAATTTGGTGGAGGAGAAATCAAAC
 ATGATCCGGAAGTCACTGGAGATGTTGGAGCTCGGCCTGAGTGAGGCACAGGTTATGATGGCTTTGTCAA
 ATCACCTGAATGCTGTGGAGTCCGAGAAGCAGAACTGCGTGCGCAGGTTCTGTCGTCTGTGCCAGGAGAA
 TCAGTGGTACGGGATGAACTGGCCAACACGCAGCAGAACTGCAGAAGAGTGAGCAGTCTGTGGCTCAA
 CTGGAGGAGGAGAAGAAGCATCTGGAGTTTATGAATCAGCTAAAAAATATGATGACGACATTTCCCCAT
 CCGAGGACAAAGACTGATTCTACCAAGAGCCTCTGGATGACCTTTTCCCAATGATGAAGACGACCC
 AGGGCAAGGAATCCAGCAGCAGCACAGCAGTGCAGCCGCGCTGCCAGCAGGGCGGCTACGAGATCCCC
 GCGCGGCTGCGGACGCTCCACAACCTGGTATCCAGTACGCCCTCGCAGGGGCGCTACGAGGTAGCTGTGC
 CCCTCTGCAAGCAGGCCCTGGAGGACCTGGAGAAGACTTCAGGACACGACCACCCGGACGTGGCCACCAT
 GCTCAACATCCTGGCCTTGGTGTACAGGGATCAGAATAAATACAAAGATGCAGCTAACCTACTGAATGAT
 GCCTTGGCTATTCGTGAGAAAACCTTTGGGCAAAGATCATCCTGCGGTGGCGGCGACTTTGAATAACCTTG
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 AGAAAAGTTTTGGGGAAGGATCACCCGATGTTGCCAAGCAGTTAAATAACTTGGCCTTACTGTGCCAG
 AACCAGGGCAAGTATGAAGAAGTAGAATATTATTATCAAAGAGCCCTCGAGATCTACCAGACAAAACCTGG
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 GATGAAAATAAACCCATCTGGATGCATGCTGAAGAAAGAGAAGAATGCAAAGGAAAGCAAAGGATGGGA
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 CGGAGGGGAGGAAGTGAATGAGCGTAGAGTGAACGGGGATGGCACTGGATCTTTAAACGCAGTGGT
 TCCTTTAGCAAACCTCCGGCTTCCATTAGACGCAGCAGTGAAGCTGGTTAGGAAGCTGAAGGGAGGAA
 GTTCACGAGAGAGTGAGCCAAAGAACCCCGGGGCTCTCTGGCCGAGCCTTTTTTGTGGAAAACGACAG
 CAGCAGCAGTGGCTGGAAGACGCCACCGCTAAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

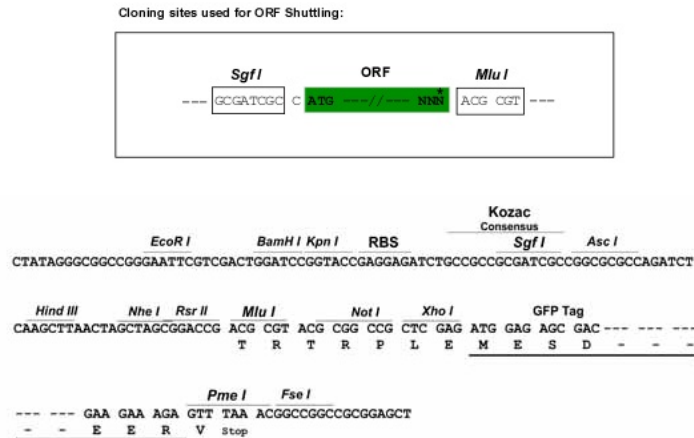
>RG226028 representing NM_001130107
 Red=Cloning site Green=Tags(s)

MYDNMSTMVYIKEDKLEKLTQDEIISKTKQVIQGLEALKNEHNSILQSLLETCLKLKKDDENSLVEEKS
 MIRKSLEMLELGLSEAQVMMALSNHLNAVESEKQKLRQVRRQCENQWLRDELANTQQKLQKSEQSVAQ
 LEEEEKHLEFMNQLKKYDDDISPSEDKDSTKEPLDDLFPNDEDDPGQGIQQQHSSAAAAAQGGYEIP
 ARLRTLHNLVIQYASQGRYEVAVPLCKQALEDLEKTSGHDPDVATMLNILALVYRDQNKYKDAANLLND
 ALAIREKTLGKDHPAVAATLNNLAVLYGKRGKYKEAEPLCKRALEIREKVLGKDHPDVAQLNNLALLCQ
 NQKGYEEVEYYYQRALEIYQTKLGPDDPNVAKTKNNLASCYLKQKFKQAETLYKEILTRAHEREFGSVD
 DENKPIWMHAEERECECKGKQKDGTSFGEYGGWYACKVDSPTVTTLKNL GALYRRQKFEAAETLEEA
 MRSRKQGLDNVHKQRAEVLNDPENMEKRRSRESLNVVVKYESGPDGGEEVSMSEVWNGDTGSLKRS
 SFSKLRASIRRSSEKLVRLKKGSSRESEPKNPGASLAELFVENDSSSSGLEDTAN

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001130107

ORF Size: 1854 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_001130107.1](#), [NP_001123579.1](#)

RefSeq Size: 2530 bp

RefSeq ORF: 1857 bp

Locus ID: 3831

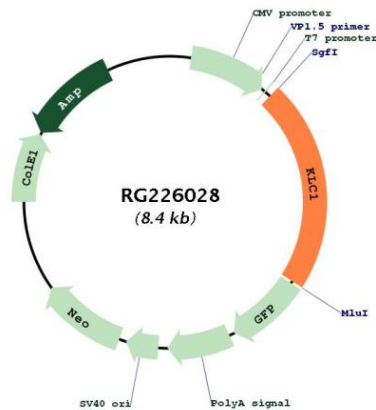
UniProt ID: [Q07866](#)

Cytogenetics: 14q32.33

Protein Families: Druggable Genome

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 and/or biological validity of most of these variants have not been determined. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG226028