

Product datasheet for **RG204296**

KLHL22 (NM_032775) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KLHL22 (NM_032775) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KLHL22
Synonyms:	KELCHL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide
Sequence:**

>RG204296 representing NM_032775
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCAGAGGAGCAGGAGTTACCCAGCTCTGCAAGTTGCCTGCACAGCCCTCACACCCACACTGCGTGA
 ACAACACCTACCGCAGCGCACAGCACTCCAGGCTCTGCTCCGAGGGCTGCTGGCTCTCCGGGACAGCGG
 AATCCTCTTCGATGTTGTGCTGGTGGAGGGCAGACATCGAGGCCATCGCATCCTGCTGGCTGCG
 TCCTGCGATTACTTCAGAGGAATGTTTGTGGGGATTGAAGGAGATGGAACAGGAAGAGGTCTGATCC
 ACGGTGTGCTCTACAATGCTATGTGCCAAATCCTACATTCATATACACCTCCGAGCTGGAGCTCAGCCT
 GAGCAATGTACAAGACACTGGTGGCTGCCTGCCAGTTCAGATCCAGAAATTATCCATTTCTGCTGT
 GATTTCTCATGTCTGGGTGGACGAAGAGAATTCGATGTCTACCGGCTGGCAGAGCTGTTTGACT
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 GTATACTTGATTGGAGGGGACAACAATGTCCAAGGATTCGAGCAGAGTCCCGATGCTGGAGGTATGACC
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 GGCTACGTGCACATTTACGATGTGGAGAAGGACTGCTGGGAGGAAGGGCCCCAGCTGGACAACCTCATCT
 CAGGCCTGGCGGCTGTGTGCTACCCCTGCCCGCTCCCTGCTCCTTGAGCCGCCCGCGGGACCCCTGA
 CCGCAGCCAGGCCGACCCGACTTTGCCTCTGAGGTGATGAGTGTGTCTGACTGGGAGGAGTTTGACAAAC
 TCCAGTGAGGAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

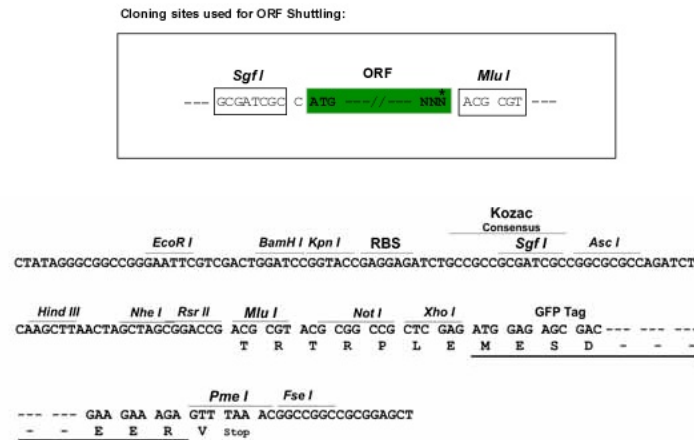
>RG204296 representing NM_032775
 Red=Cloning site Green=Tags(s)

MAEEQEFTQLCKLPAQPSHPHCVNNTYRSAQHSQALLRGLLALRDSGILFDVVLVEGRHIEAHRILLAA
 SCDYFRGMFAGGLKEMEQUEVLIHGVSYNAMCQILHFIYTSELESLSNVQETLVAACQLQIPEIIHFCC
 DFLMSWVDEENILDVYRLAELFDLSRLTEQLDTYILKNFVAFSRTDKYRQLPLEKVYSLLSSNRLEVSCE
 TEVYEGALLYHYSLEQVQADQISLHEPPKLLTVRFPLMEAEVLQRLHDKLDPSPLRDTVASALMYHRNE
 SLQPSLQSPQTELRSDFQCQVVGFGGIHSTPSTVLSQAKYLNPLLGEWKHFTASLAPRMSNQGIIVLNNF
 VYLIGDNNVQGFRAESRCWRYDPRHNRWFQIQSLQHEADLSVCVVGRYIYAVAGRDIYHNDLNAVERYD
 PATNSWAYVAPLKREYVAHAGATLEGKMYITCGRRGEDYKETHCYDPGSNTWHTLADGPVRRWHGMAT
 LLNKLIVYIGGSNNDAGYRRDVHQVACYSCTSGQWSSVCPLPAGHGEPGIAVLNRIYVLGGRSHNRGSR
 GYVHIYDVEKDCWEEGPQLDNSISGLAACVLTLPRSLLEPPRGTPDRSQADPDFASEVMSVSDWEEFDN
 SSED

TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_032775

ORF Size: 1902 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_032775.4](#)

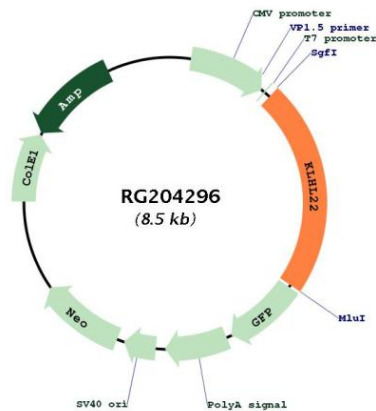
RefSeq Size: 2602 bp

RefSeq ORF: 1905 bp

Locus ID: 84861
UniProt ID: [Q53GT1](#)
Cytogenetics: 22q11.21
Domains: BTB, Kelch

Gene Summary: Substrate-specific adapter of a BCR (BTB-CUL3-RBX1) E3 ubiquitin ligase complex required for chromosome alignment and localization of PLK1 at kinetochores. The BCR(KLHL22) ubiquitin ligase complex mediates monoubiquitination of PLK1, leading to PLK1 dissociation from phosphoreceptor proteins and subsequent removal from kinetochores, allowing silencing of the spindle assembly checkpoint (SAC) and chromosome segregation. Monoubiquitination of PLK1 does not lead to PLK1 degradation (PubMed:19995937, PubMed:23455478). The BCR(KLHL22) ubiquitin ligase complex is also responsible for the amino acid-stimulated 'Lys-48' polyubiquitination and proteasomal degradation of DEPDC5. Through the degradation of DEPDC5, releases the GATOR1 complex-mediated inhibition of the TORC1 pathway. It is therefore an amino acid-dependent activator within the amino acid-sensing branch of the TORC1 pathway, indirectly regulating different cellular processes including cell growth and autophagy (PubMed:29769719).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG204296