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Product datasheet for RC204296

KLHL22 (NM_032775) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KLHL22 (NM_032775) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KLHL22
Synonyms:	KELCHL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC204296 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCAGAGGAGCAGGAGTTCACCCAGCTCTGCAAGTTGCCTGCACAGCCCTCACACCCACACTGCGTGA
ACAACACCTACCGCAGCGCACAGCACTCCCAGGCTCTGCTCCGAGGGCTGCTGGCTCTCCGGGACAGCGG
AATCCTCTTCGATGTTGTGCTGGTGGTGGAGGGCAGACACATCGAGGCCCATCGCATCCTGCTGGCTGCG
TCCTGCGATTACTTCAGAGGAATGTTTGCTGGGGGATTGAAGGAGATGGAACAGGAAGAGGTCCTGATCC
ACGGTGTGTCCTACAATGCTATGTGCCAAATCCTACATTTCATATACACCTCCGAGCTGGAGCTCAGCCT
GAGCAATGTACAAGAGACACTGGTGGCTGCCTGCCAGCTTCAGATCCCAGAAATTATCCATTTCTGCTGT
GATTTCCTCATGTCCTGGGTGGACGAAGAGAACATTCTCGATGTCTACCGGCTGGCAGAGCTGTTTGACT
TGAGCCGCCTGACTGAGCAACTGGACACCTATATCCTCAAAAACTTTGTGGCCTTCTCTCGGACTGACAA
GTACCGCCAGCTTCCATTGGAGAAGGTCTACTCCCTCCTCAGCAGCAATCGCCTGGAGGTCTCCTGCGAG
ACCGAGGTATATGAGGGGGCCCTTCTCTACCATTATAGCCTGGAGCAGGTGCAGGCTGACCAGATCTCGC
TGCACGAGCCCCCAAAGCTCCTTGAGACAGTGCGGTTTCCGCTGATGGAAGCTGAGGTCCTGCAGCGGCT
GCATGACAAGCTGGACCCCAGCCCTTTGAGGGACACAGTGGCCAGCGCCCTCATGTACCACCGGAACGAG
AGCCTACAGCCCAGCCTGCAGAGCCCGCAAACGGAGCTGCGGTCGGACTTCCAGTGCGTTGTGGGCTTCG
GGGGCATTCACTCCACGCCGTCCACTGTCCTCAGCGACCAGGCCAAGTATCTAAACCCCTTACTGGGAGA
GTGGAAGCACTTCACTGCCTCCCTGGCCCCCCGCATGTCCAACCAGGGCATCGCGGTGCTCAACAACTTC
GTATACTTGATTGGAGGGGACAACAATGTCCAAGGATTTCGAGCAGAGTCCCGATGCTGGAGGTATGACC
CACGGCACAACCGCTGGTTCCAGATCCAGTCCCTGCAGCAGGAGCACGCCGACCTGTCCGTGTGTGTTGT
AGGCAGGTACATCTACGCTGTGGCGGGCCGTGACTACCACAATGACCTGAATGCTGTGGAGCGCTACGAC
CCTGCCACCAACTCCTGGGCATACGTGGCCCCACTCAAGAGGGAGGTGTATGCCCACGCAGGCGCGACGC
TGGAGGGGAAGATGTATATCACCTGCGGCCGCAGAGGGGAGGATTACCTGAAAGAGACACACTGCTACGA
TCCAGGCAGCAACACTTGGCACACACTGGCTGATGGGCCTGTGCGGCGCGCCTGGCACGGCATGGCAACC
CTCCTCAACAAGCTGTATGTGATCGGGGGCAGCAACAACGATGCCGGATACAGGAGGGACGTGCACCAGG
TGGCCTGCTACAGCTGCACGTCTGGACAGTGGTCATCTGTCTGCCCACTCCCTGCTGGGCACGGTGAGCC
TGGCATTGCTGTGCTGGACAACAGGATCTATGTGTTAGGTGGCCGCTCACACAACCGCGGCAGCCGCACA
GGCTACGTGCACATTTACGATGTGGAGAAGGACTGCTGGGAGGAAGGGCCCCAGCTGGACAACTCCATCT
CAGGCCTGGCGGCCTGTGTGCTCACCCTGCCCCGCTCCCTGCTCCTTGAGCCGCCCCGCGGGACCCCTGA
CCGCAGCCAGGCCGACCCGGACTTTGCCTCTGAGGTGATGAGTGTGTCTGACTGGGAGGAGTTTGACAAC
TCCAGTGAGGAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC204296 protein sequence
Red=Cloning site Green=Tags(s)

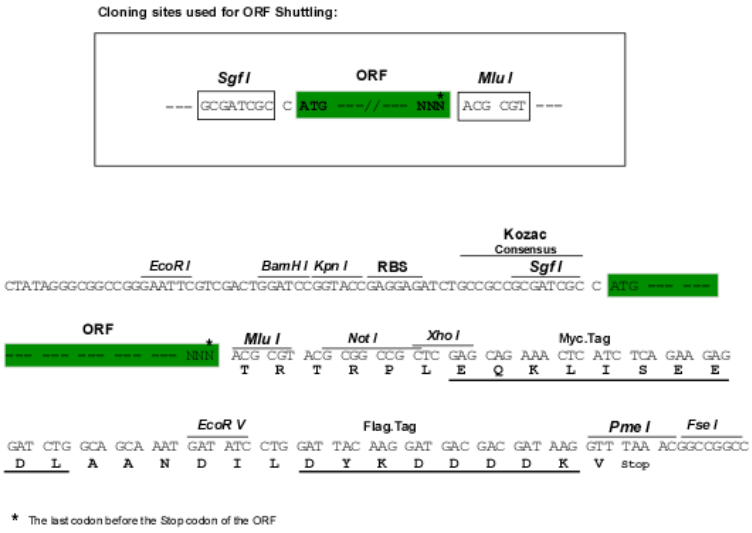
MAEEQEFTQLCKLPAQPSHPHCVNNTYRSAQHSQALLRGLLALRDSGILFDVVLVVEGRHIEAHRILLAA
SCDYFRGMFAGGLKEMEQEEVLIHGVSYNAMCQILHFIYTSELELSLSNVQETLVAACQLQIPEIIHFCC
DFLMSWVDEENILDVYRLAELFDLSRLTEQLDTYILKNFVAFSRTDKYRQLPLEKVYSLLSSNRLEVSCE
TEVYEGALLYHYSLEQVQADQISLHEPPKLLETVRFPLMEAEVLQRLHDKLDPSPLRDTVASALMYHRNE
SLQPSLQSPQTELRSDFQCVVGFGGIHSTPSTVLSDQAKYLNPLLGEWKHFTASLAPRMSNQGIAVLNNF
VYLIGGDNNVQGFRAESRCWRYDPRHNRWFQIQSLQQEHADLSVCVVGRYIYAVAGRDYHNDLNAVERYD
PATNSWAYVAPLKREVYAHAGATLEGKMYITCGRRGEDYLKETHCYDPGSNTWHTLADGPVRRAWHGMAT
LLNKLYVIGGSNNDAGYRRDVHQVACYSCTSGQWSSVCPLPAGHGEPGIAVLDNRIYVLGGRSHNRGSRT
GYVHIYDVEKDCWEEGPQLDNSISGLAACVLTLPRSLLLEPPRGTPDRSQADPDFASEVMSVSDWEEFDN
SSED

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6567_h03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_032775

ORF Size: 1902 bp

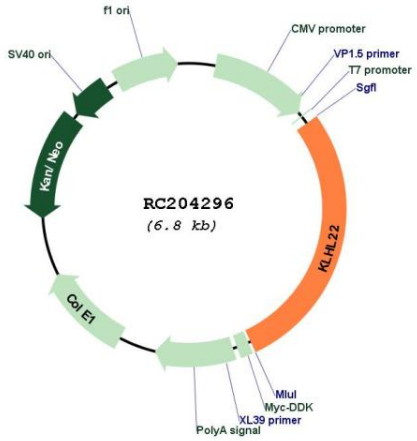
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

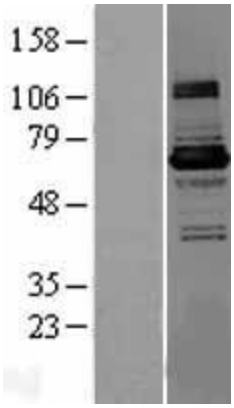
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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:	2637 bp
RefSeq ORF:	1905 bp
Locus ID:	84861
UniProt ID:	Q53GT1
Cytogenetics:	22q11.21
Domains:	BTB, Kelch
MW:	71.7 kDa
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]

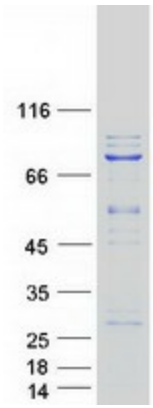
Product images:



Circular map for RC204296



Western blot validation of overexpression lysate (Cat# [LY409951]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204296 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified KLHL22 protein (Cat# [TP304296]). The protein was produced from HEK293T cells transfected with KLHL22 cDNA clone (Cat# RC204296) using MegaTran 2.0 (Cat# [TT210002]).