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Product datasheet for RC202667

Kallikrein 2 (KLK2) (NM_005551) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kallikrein 2 (KLK2) (NM_005551) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kallikrein 2
Synonyms:	hGK-1; hK2; KLK2A2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC202667 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGTGGGACCTGGTTCTCTCCATCGCCTTGTCTGTGGGGTGCACTGGTGCCGTGCCCCTCATCCAGTCTC GGATTGTGGGAGGCTGGGAGTGTGAGAAGCATTCCCAACCCTGGCAGGTGGCTGTGTACAGTCATGGATG GGCACACTGTGGGGGTGTCCTGGTGCACCCCCAGTGGGTGCTCACAGCTGCCCATTGCCTAAAGAAGAAT AGCCAGGTCTGGCTGGGTCGGCACAACCTGTTTGAGCCTGAAGACACAGGCCAGAGGGTCCCTGTCAGCC ACAGCTTCCCACACCCGCTCTACAATATGAGCCTTCTGAAGCATCAAAGCCTTAGACCAGATGAAGACTC CAGCCATGACCTCATGCTGCTTCGCCTGTCAGAGCCTGCCAAGATCACAGATGTTGTGAAGGTCCTGGGC CTGCCCACCCAGGAGCCAGCACTGGGGACCACCTGCTACGCCTCAGGCTGGGGCAGCATCGAACCAGAGG AGTTCTTGCGCCCCAGGAGTCTTCAGTGTGTGAGCCTCCATCTCCTGTCCAATGACATGTGTGCTAGAGC TTACTCTGAGAAGGTGACAGAGTTCATGTTGTGTGCTGGGCTCTGGACAGGTGGTAAAGACACTTGTGGG GGTGATTCTGGGGGTCCACTTGTCTGTAATGGTGTGCTTCAAGGTATCACATCATGGGGCCCTGAGCCAT GTGCCCTGCCTGAAAAGCCTGCTGTGTACACCAAGGTGGTGCATTACCGGAAGTGGATCAAGGACACCAT CGCAGCCAACCCC ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC202667 protein sequence
Red=Cloning site Green=Tags(s)

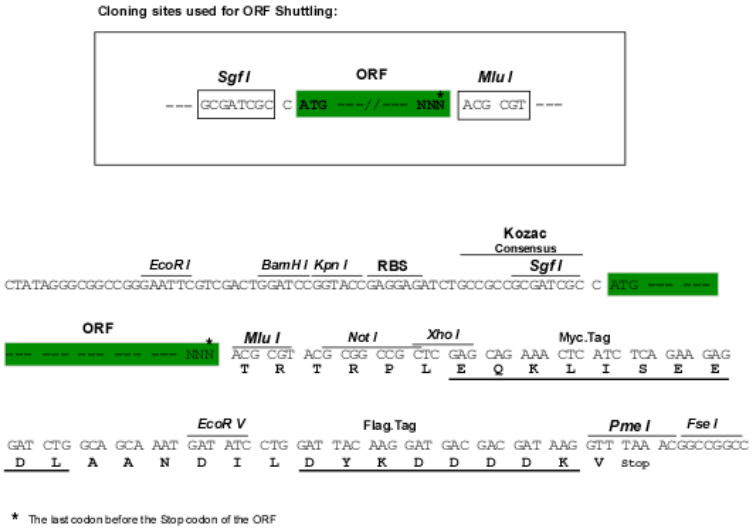
MWDLVLSIALSVGCTGAVPLIQSRIVGGWECEKHSQPWQVAVYSHGWAHCGGVLVHPQWVLTAAHCLKKN
SQVWLGRHNLFEPEDTGQRVPVSHSFPHPLYNMSLLKHQSLRPDEDSSHDLMLLRLSEPAKITDVVKVLG
LPTQEPALGTTCYASGWGSIEPEEFLRPRSLQCVSLHLLSNDMCARAYSEKVTEFMLCAGLWTGGKDTCG
GDSGGPLVCNGVLQGITSWGPEPCALPEKPAVYTKVVHYRKWIKDTIAANP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6079_h02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_005551

ORF Size: 783 bp

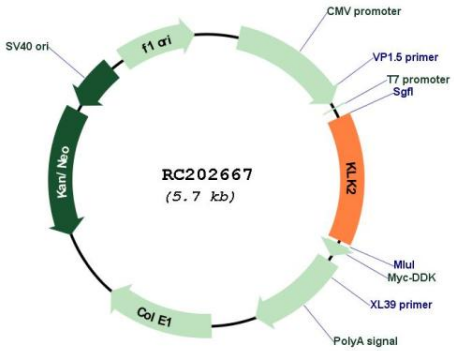
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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 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

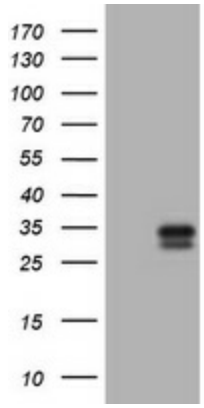
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_005551.2
RefSeq Size:	2855 bp
RefSeq ORF:	786 bp
Locus ID:	3817
UniProt ID:	P20151
Cytogenetics:	19q13.33
Domains:	Tryp_SPc
Protein Families:	Druggable Genome, Protease
MW:	28.7 kDa
Gene Summary:	This gene encodes a member of the grandular kallikrein protein family. Kallikreins are a subgroup of serine proteases that are clustered on chromosome 19. Members of this family are involved in a diverse array of biological functions. The protein encoded by this gene is a highly active trypsin-like serine protease that selectively cleaves at arginine residues. This protein is primarily expressed in prostatic tissue and is responsible for cleaving pro-prostate-specific antigen into its enzymatically active form. This gene is highly expressed in prostate tumor cells and may be a prognostic maker for prostate cancer risk. Alternate splicing results in both coding and non-coding transcript variants. [provided by RefSeq, Jan 2012]

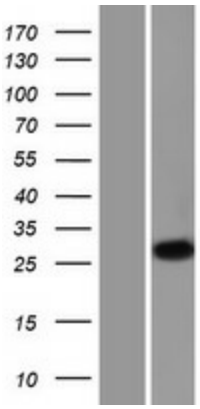
Product images:



Circular map for RC202667



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY KLK2 (Cat# RC202667, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-KLK2(Cat# [TA802077]). Positive lysates [LY417229] (100ug) and [LC417229] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY417229]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202667 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

Coomassie blue staining of purified KLK2 protein (Cat# [TP302667]). The protein was produced from HEK293T cells transfected with KLK2 cDNA clone (Cat# RC202667) using MegaTran 2.0 (Cat# [TT210002]).