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Product datasheet for RC229983

Kininogen 1 (KNG1) (NM_001166451) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kininogen 1 (KNG1) (NM_001166451) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kininogen 1
Synonyms:	BDK; BK; HAE6; HMWK; KNG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC229983 representing NM_001166451
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAAACTAATTACCATCCTTTTCCTCTGCTCCAGGCTGCTACTAAGTTTAACCCAGGAATCACAGTCCG
AGGAAATTGACTGCAATGACAAGGATTTATTTAAAGCTGTGGATGCTGCTCTGAAGAAATATAACAGTCA
AAACCAAAGTAACAACCAGTTTGTATTGTACCGCATAACTGAAGCCACTAAGACGGTTGGCTCTGACACG
TTTTATTCCTTCAAGTACGAAATCAAGGAGGGGGATTGTCCTGTTCAAAGTGGCAAAACCTGGCAGGACT
GTGAGTACAAGGATGCTGCAAAAGCAGCCACTGGAGAATGCACGGCAACCGTGGGGAAGAGGAGCAGTAC
GAAATTCTCCGTGGCTACCCAGACCTGCCAGATTACTCCAGCCGAGGGCCCTGTGGTGACAGCCCAGTAC
GACTGCCTCGGCTGTGTGCATCCTATATCAACGCAGAGCCCAGACCTGGAGCCCATTCTGAGACACGGCA
TTCAGTACTTTAACAACAACACTCAACATTCCTCCCTCTTCATGCTTAATGAAGTAAAACGGGCCCAAAG
ACAGGATACCGGTGAATGTACAGATAATGCATACATCGATATTCAGCTACGAATTGCTTCCTTCTCACAG
AACTGTGACATTTATCCAGGGAAGGATTTTGTACAACCACCTACCAAGATTTGCGTGGGCTGCCCCAGAG
ATATACCCACCAACAGCCCAGAGCTGGAGGAGACACTGACTCACACCATCACAAAGCTTAATGCAGAGAA
TAACGCAACTTTCTATTTCAAGATTGACAATGTGAAAAAAGCAAGAGTACAGGTGGTGGCTGGCAAGAAA
TATTTTATTGACTTCGTGGCCAGGGAAACCACATGTTCCAAGGAAAGTAATGAAGAGTTGACCGAAAGCT
GTGAGACCAAAAAACTTGGCCAAAGCCTAGATTGCAACGCTGAAGTTTATGTGGTACCCTGGGAGAAAAA
AATTTACCCTACTGTCAACTGTCAACCACTGGGAATGATCTCACTGATGAAAAGGCCTCCAGGTTTTTCA
CCTTTCCGATCATCACGAATAGGGGAAATAAAAGAAGAAACAACTAGTCACCTAAGGTCCTGCGAGTACA
AGGGTCGACCCCCAAAGGCAGGGGCAGAGCCAGCATCTGAGAGGGAGGTCTCT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC229983 representing NM_001166451
Red=Cloning site Green=Tags(s)

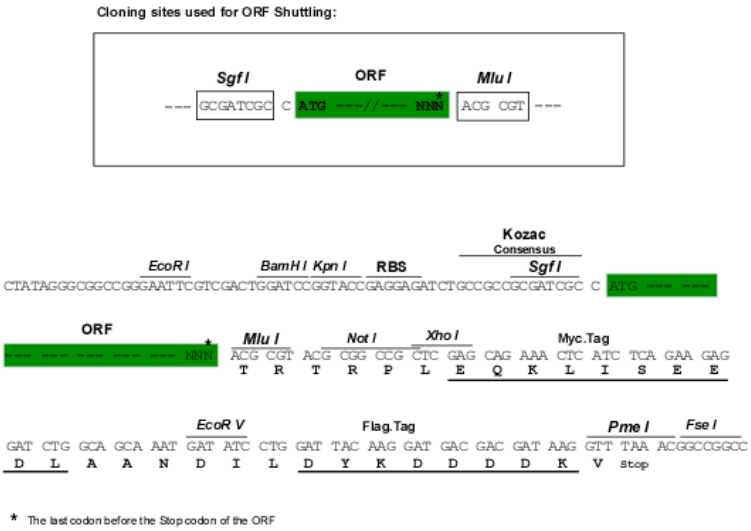
MKLITILFLCSRLLLSLTQESQSEEIDCNDKDLFKAVDAALKKYNSQNQSNNQFVLYRITEATKTVGSDT
FYSFKYEIKEGDCPVQSGKTWQDCEYKDAAKAATGECTATVGKRSSTKFSVATQTCQITPAEGPVVTAQY
DCLGCVHPISTQSPDLEPILRHGIQYFNNNTQHSSLFMLNEVKRAQRQDTGECTDNAYIDIQLRIASFSQ
NCDIYPGKDFVQPPTKICVGCPRDIPTNSPELEETLTHTITKLNAENNATFYFKIDNVKKARVQVVAGKK
YFIDFVARETTCSKESNEELTESCETKKLGQSLDCNAEVYVVPWEKKIYPTVNCQPLGMISLMKRPPGFS
PFRSSRIGEIKEETTSHLRSCEYKGRPPKAGAEPASEREVS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8056_f04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001166451

ORF Size: 1173 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_001166451.2

RefSeq ORF: 1176 bp

Locus ID: 3827

UniProt ID: P01042

Cytogenetics: 3q27.3

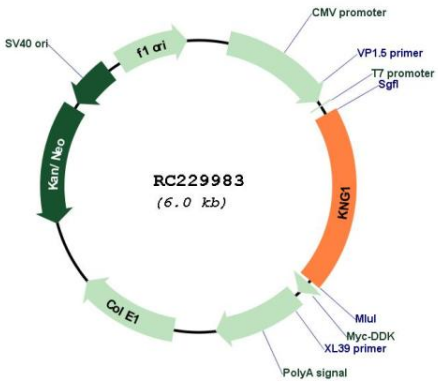
Protein Families: Druggable Genome, Secreted Protein

Protein Pathways: Complement and coagulation cascades

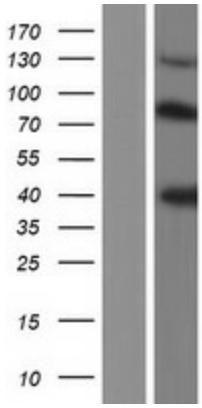
MW: 44.3 kDa

Gene Summary: This gene uses alternative splicing to generate two different proteins- high molecular weight kininogen (HMWK) and low molecular weight kininogen (LMWK). HMWK is essential for blood coagulation and assembly of the kallikrein-kinin system. Also, bradykinin, a peptide causing numerous physiological effects, is released from HMWK. Bradykinin also functions as an antimicrobial peptide with antibacterial and antifungal activity. In contrast to HMWK, LMWK is not involved in blood coagulation. Infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) reduces or depletes angiotensin converting enzyme 2 (ACE2), which results in an increase in levels of des-Arg(9)-bradykinin, a bioactive metabolite of bradykinin that is associated with lung injury and inflammation. Three transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2020]

Product images:



Circular map for RC229983



Western blot validation of overexpression lysate (Cat# [LY432983]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC229983 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).