

# Product datasheet for SC328621

### OriGene Technologies, Inc.

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## Kininogen 1 (KNG1) (NM 001166451) Human Untagged Clone

#### **Product data:**

**Product Type: Expression Plasmids** 

**Product Name:** Kininogen 1 (KNG1) (NM 001166451) Human Untagged Clone

Tag: Tag Free

Symbol: Kininogen 1

Synonyms: BDK; BK; HAE6; HMWK; KNG

**Mammalian Cell** 

Selection:

Neomycin

Vector: pCMV6-Entry (PS100001) E. coli Selection: Kanamycin (25 ug/mL)

**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_001166451, the custom clone sequence may differ by one or

more nucleotides

ATGAAACTAATTACCATCCTTTTCCTCTGCTCCAGGCTGCTACTAAGTTTAACCCAGGAA CTGAAGAAATATAACAGTCAAAACCAAAGTAACAACCAGTTTGTATTGTACCGCATAACT GAAGCCACTAAGACGGTTGGCTCTGACACGTTTTATTCCTTCAAGTACGAAATCAAGGAG GGGGATTGTCCTGTTCAAAGTGGCAAAACCTGGCAGGACTGTGAGTACAAGGATGCTGCA AAAGCAGCCACTGGAGAATGCACGGCAACCGTGGGGAAGAGGAGCAGTACGAAATTCTCC GTGGCTACCCAGACCTGCCAGATTACTCCAGCCGAGGGCCCTGTGGTGACAGCCCAGTAC GACTGCCTCGGCTGTGCATCCTATATCAACGCAGAGCCCAGACCTGGAGCCCATTCTG GAAGTAAAACGGCCCAAAGACAGGATACCGGTGAATGTACAGATAATGCATACATCGAT ATTCAGCTACGAATTGCTTCCTTCTCACAGAACTGTGACATTTATCCAGGGAAGGATTTT GTACAACCACCTACCAAGATTTGCGTGGGCTGCCCCAGAGATATACCCACCAACAGCCCA GAGCTGGAGGAGACACTGACTCACACCATCACAAAGCTTAATGCAGAGAATAACGCAACT TATTTTATTGACTTCGTGGCCAGGGAAACCACATGTTCCAAGGAAAGTAATGAAGAGTTG ACCGAAAGCTGTGAGACCAAAAACTTGGCCAAAGCCTAGATTGCAACGCTGAAGTTTAT GTGGTACCCTGGGAGAAAAAATTTACCCTACTGTCAACTGTCAACCACTGGGAATGATC TCACTGATGAAAAGGCCTCCAGGTTTTTCACCTTTCCGATCATCACGAATAGGGGAAATA AAAGAAGAACAACTAGTCACCTAAGGTCCTGCGAGTACAAGGGTCGACCCCCAAAGGCA

GGGGCAGAGCCAGCATCTGAGAGGGAGGTCTCTTGA

**Restriction Sites:** Please inquire ACCN: NM 001166451





#### Kininogen 1 (KNG1) (NM\_001166451) Human Untagged Clone - SC328621

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a

point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative

RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation: This TrueClone is provided through our Custom Cloning Process that includes sub-cloning

into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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: <u>NM 001166451.1</u>, <u>NP 001159923.1</u>

 RefSeq Size:
 2035 bp

 RefSeq ORF:
 1176 bp

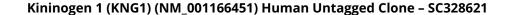
 Locus ID:
 3827

 UniProt ID:
 P01042

Cytogenetics: 3q27.3

Protein Families: Druggable Genome, Secreted Protein

Protein Pathways: Complement and coagulation cascades





#### **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] Transcript Variant: This variant (3) uses an alternate splice pattern in the 3' coding region and lacks an alternate in-frame exon, compared to variant 1. The resulting isoform (3) has a shorter and distinct C-terminus and lacks an internal segment, compared to isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.