

## Product datasheet for **SC328621**

### 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:	<p>&gt;NCBI ORF sequence for NM_001166451, the custom clone sequence may differ by one or more nucleotides</p> <pre> ATGAACTAATTACCATCCTTTCTCTGCTCCAGGCTGCTACTAAGTTTAACCCAGGAA TCACAGTCCGAGGAAATTGACTGCAATGACAAGGATTTATTTAAAGCTGTGGATGCTGCT CTGAAGAAATATAACAGTCAAAACCAAAGTAACAACCAAGTTTGTATTGTACCGCATAACT GAAGCCACTAAGACGGTTGGCTCTGACACGTTTTATTCCTTCAAGTACGAAATCAAGGAG GGGGATTGTCTGTTCAAAGTGGCAAAACCTGGCAGGACTGTGAGTACAAGGATGCTGCA AAAGCAGCCACTGGAGAATGCACGGCAACCGTGGGGAAGAGGAGCAGTACGAAATTCTCC GTGGCTACCCAGACCTGCCAGATTACTCCAGCCGAGGGCCCTGTGGTGACAGCCCAGTAC GACTGCCTCGGCTGTGTGCATCCTATATCAACGCAGAGCCAGACCTGGAGCCCATTCTG AGACACGGCATTCACTACTTTAACAACAACACTCAACATTCCTCCCTCTTCATGCTTAAT GAAGTAAACGGGCCAAAGACAGGATACCGGTGAATGTACAGATAATGCATACATCGAT ATTCAGCTACGAATTGCTTCCTTCTCACAGAACTGTGACATTTATCCAGGGAAGGATTTT GTACAACCACCTACCAAGATTTGCGTGGGCTGCCCCAGAGATATACCCACCAACAGCCCA GAGCTGGAGGAGACACTGACTCACCATCACAAAGCTTAATGCAGAGAAATAACGCAACT TTCTATTTCAAGATTGACAATGTGAAAAAGCAAGAGTACAGGTGGTGGCTGGCAAGAAA TATTTTATTGACTTCGTGGCCAGGGAACCATGTTCCAAGGAAAGTAAATGAAGAGTTG ACCGAAAGCTGTGAGACCAAAAACTTGCCAAAGCCTAGATTGCAACGCTGAAGTTTAT GTGGTACCCTGGGAGAAAAAATTTACCTACTGTCAACTGTCAACCACTGGGAATGATC TCATGATGAAAAGGCCTCCAGGTTTTTACCTTTCCGATCATCACGAATAGGGGAAATA AAAGAAGAAACAAGTACCTAAGGTCTGCGAGTACAAGGGTCGACCCCAAAGGCA GGGGCAGAGCCAGCATCTGAGAGGGAGGTCTCTTGA </pre>
Restriction Sites:	Please inquire
ACCN:	NM_001166451


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<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	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.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<u>NM_001166451.1, NP_001159923.1</u>
<b>RefSeq Size:</b>	2035 bp
<b>RefSeq ORF:</b>	1176 bp
<b>Locus ID:</b>	3827
<b>UniProt ID:</b>	<u>P01042</u>
<b>Cytogenetics:</b>	3q27.3
<b>Protein Families:</b>	Druggable Genome, Secreted Protein
<b>Protein Pathways:</b>	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.