

## Product datasheet for **RC208871**

### Plasminogen (PLG) (NM\_000301) Human Tagged ORF Clone

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids                                  |
| Product Name:             | Plasminogen (PLG) (NM_000301) Human Tagged ORF Clone |
| Tag:                      | Myc-DDK  |
| Symbol:                   | Plasminogen  |
| Synonyms:                 | HAE4   |
| Mammalian Cell Selection: | Neomycin   |
| Vector:                   | pCMV6-Entry (PS100001)                               |
| E. coli Selection:        | Kanamycin (25 ug/mL)                                 |



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**ORF Nucleotide  
Sequence:**

>RC208871 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGAACATAAGGAAGTGGTTCTTCTACTTCTTTTATTTCTGAAATCAGGTCAAGGAGAGCCTCTGGATG  
 ACTATGTGAATACCCAGGGGCTTCACTGTTCACTGTCAGTCACTAAGAAGCAGCTGGGAGCAGGAAGTATAGA  
 AGAATGTGCAGCAAAATGTGAGGAGGACGAAGAATTCACCTGCAGGGCATTCCAATATCAGATAAGAG  
 CAACAATGTGTGATAATGGCTGAAAACAGGAAGTCTCCATAATCATTAGGATGAGAGATGTAGTTTAT  
 TTGAAAAGAAAGTGTATCTCTCAGAGTGAAGACTGGGAATGAAAAGAACTACAGAGGGACGATGTCCAA  
 AACAAAAATGGCATCACCTGTCAAAAATGGAGTTCCACTTCTCCCCACAGACCTAGATTCTCACCTGCT  
 ACACACCCCTCAGAGGGACTGGAGGAGAACTACTGCAGGAATCCAGACAACGATCCGAGGGGCCCTGGT  
 GCTATACTACTGATCCAGAAAAGAGATATGACTACTGCGACATTCTTGAGTGTGAAGAGGAATGTATGCA  
 TTGCAGTGGAGAAAATATGACGGCAAAATTTCCAAGACCATGTCTGGACTGGAATGCCAGGCCTGGGAC  
 TCTCAGAGCCACACGCTCATGGATACATTCTTCCAAATTTCCAAACAAGAACCTGAAGAAGAATTACT  
 GTCGTAACCCCGATAGGGAGCTGCGGCCTTGGTGTTCACCACCGACCCCAACAAGCGCTGGGAACCTTG  
 TGACATCCCCCGCTGCACAACACCTCCACCATCTTCTGGTCCCACCTACCAGTGTCTGAAGGGAACAGGT  
 GAAAATATCGCGGGAATGTGGCTGTTACCGTGTCCGGGCACACCTGTCAGCACTGGAGTGCACAGACCC  
 CTCACACACATAACAGGACACCAGAAAATTTCCCTGCAAAAATTTGGATGAAAATCTACTGCCGCAATCC  
 TGACGGAAAAAGGGCCCCATGGTGCCATACAACCAACAGCCAAGTGGGTGGGAGTACTGTAAGATACCG  
 TCCTGTGACTCTCCCCAGTATCCACGGAAACAATTGGCTCCCACAGCACCACTGAGCTAACCCCTGTGG  
 TCCAGGACTGCTACCATGGTGTGAGCAGAGTACCGAGGCACATCCTCCACCACCACAGAAAGAA  
 GTGTCAGTCTTGGTCATCTATGACACCACACCGGCACCAGAAGACCCAGAAAATACCCAAATGCTGGC  
 CTGACAATGAACTACTGCAGGAATCCAGATGCCGATAAAGGCCCTGGTGTTCACCACAGACCCACGCG  
 TCAGGTGGGAGTACTGCAACCTGAAAAATGCTCAGGAACAGAAGCGAGTGTGTAGCACCTCCGCTGT  
 TGTCTGCTTCCAGATGTAGAGACTCCTTCCGAAGAAGACTGTATGTTTGGGAATGGGAAAGGATACCGA  
 GGCAAGAGGGCGACCACTGTTACTGGGACGCCATGCCAGGACTGGGCTGCCAGGAGCCCATAGACACA  
 GCATTTTCACTCCAGAGACAAAATCCACGGCGGGTCTGGAAAAAATTAAGTCCGTAACCCCTGATGGTGA  
 TGTAGGTGGTCCCTGGTGTACACGACAAAATCCAAGAAAATTTACGACTACTGTGATGTCCCTCAGTGT  
 GCGGCCCTTCATTTGATTGTGGGAAGCCTCAAGTGGAGCCGAAGAAATGTCCTGGAAGGTTGTAGGGG  
 GGTGTGTGGCCACCCACATTCTGGCCCTGGCAAGTCACTTGAACAAGGTTTGGAAATGCACCTCTG  
 TGGAGGCACCTTGATATCCCAGAGTGGGTGTTGACTGCTGCCACTGCTTGGAGAAGTCCCAAGGCCCT  
 TCATCCTACAAGGTATCCTGGGTGCACACCAAGAAGTGAATCTCGAACCGCATGTTTCCAGAAATAGAAG  
 TGTCTAGGCTGTTCTTGGAGCCACACGAAAAGATATTGCCTTGCTAAAGCTAAGCAGTCTGCCGACAT  
 CACTGACAAAATATCCAGCTTGTCTGCCATCCCCAAATATGTGGTCTGCTGACCGACCGAATGTTTC  
 ATCACTGGCTGGGAGAAAACCAAGTACTTTTGGAGCTGGCCTTCTCAAGGAAGCCAGCTCCCTGTGA  
 TTGAGAATAAAGTGTGCAATCGCTATGAGTTTCTGAATGGAAGAGTCCAATCCACCGAATCTGTGCTGG  
 GCATTTGGCCGGAGGCACTGACAGTTGCCAGGGTGACAGTGGAGTCTCTGGTTTGTCTCGAGAAGGAC  
 AAATACATTTTACAAGGAGTCACTTCTTGGGGTCTTGGCTGTGCAGCCCAATAAGCCTGGTGTCTATG  
 TTCGTGTTTCAAGGTTTGTACTTGGATTGAGGGAGTGTGAGAAATAAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAAATCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC208871 protein sequence  
Red=Cloning site Green=Tags(s)

MEHKEVLLLLLLFLKSGQGEPLDDYVNTQGASLFSVTKKQLGAGSIEECAAKCEEDEEFTCRAFQYHSKE  
QQCVIMAENRKSSIIIRMRDVVLFKVKVYLSECKTGNGKNYRGTMSTKNGITCQKWSSTSPHRPRFSPA  
THPSEGLEENYCRNPDNDPQGPWCYTDDPEKRYDYCDILECEEECMHCSGENYDGKISKTMGLECQAWD  
SQSPHAHGYIPSKFPNKNLKKNYCRNPDRELRPWCFTTDPNKRWELCDIPRCTTPPPSSGPTYQCLKGTG  
ENYRGNVAVTVSGHTCQHWSAQTPHNRTPENFPCKNLDENYCRNPDGKRAPWCHTTNSQVRWEYCKIP  
SCDSSPVSTEQLAPTAPPELTPVVQDCYHGDGQSYRGTSSTTTTGKCCQSWSSMTPHRHQKTPENYPNAG  
LTMNYCRNPDADKGPWCFTTDPVSRWEYCNLKKCSGTEASVVAPPPVLLPDVETPSEEDCMFGNGKGYR  
GKRATTVTGTPCQDWAQEPHRHSIFTPETNPRAGLEKNYCRNPDGDVGGPWCYTTPNPKLYDYCDVPC  
AAPSFDGKQPVEPKKCPGRVVGVCVAHPHSWPQVSLRTRFGMHFCGGTLISPEWVLTAAHCLEKSPRP  
SSYKVIILGAHQEVNLEPHVQEIIEVSRLFLEPTRKDIALLLKSSPADITDKVIPACLPSPNYVADRTECF  
ITGWGETQGTFGAGLLKEAQLPVIENKVCNRYEFLNGRVQSTELCAGHLAGGTDSCQGDSSGGLVCFEKD  
KYILQGVTSWGLGARPKNKPGVYVRSRFTWIEGVMRNN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6292\\_f08.zip](https://cdn.origene.com/chromatograms/mk6292_f08.zip)

**Restriction Sites:** Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_000301

**ORF Size:** 2430 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\\_000301.5](#)

**RefSeq Size:** 3538 bp

**RefSeq ORF:** 2433 bp

**Locus ID:** 5340

**UniProt ID:** [P00747](#)

**Cytogenetics:** 6q26

**Domains:** KR, Tryp\_SPc, PAN, PAN\_AP

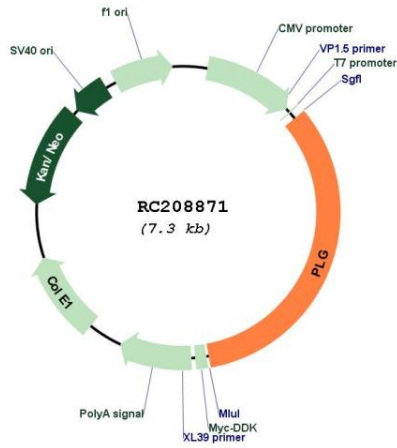
**Protein Families:** Druggable Genome, Protease, Secreted Protein

**Protein Pathways:** Complement and coagulation cascades, Neuroactive ligand-receptor interaction

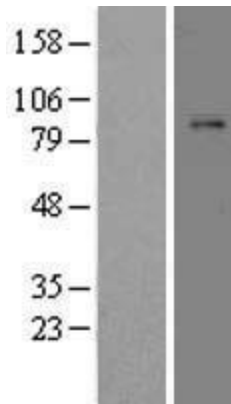
**MW:** 90.6 kDa

**Gene Summary:** The plasminogen protein encoded by this gene is a serine protease that circulates in blood plasma as an inactive zymogen and is converted to the active protease, plasmin, by several plasminogen activators such as tissue plasminogen activator (tPA), urokinase plasminogen activator (uPA), kallikrein, and factor XII (Hageman factor). The conversion of plasminogen to plasmin involves the cleavage of the peptide bond between Arg-561 and Val-562. Plasmin cleavage also releases the angiostatin protein which inhibits angiogenesis. Plasmin degrades many blood plasma proteins, including fibrin-containing blood clots. As a serine protease, plasmin cleaves many products in addition to fibrin such as fibronectin, thrombospondin, laminin, and von Willebrand factor. Plasmin is inactivated by proteins such as alpha-2-macroglobulin and alpha-2-antiplasmin in addition to inhibitors of the various plasminogen activators. Plasminogen also interacts with plasminogen receptors which results in the retention of plasmin on cell surfaces and in plasmin-induced cell signaling. The localization of plasminogen on cell surfaces plays a role in the degradation of extracellular matrices, cell migration, inflammation, wound healing, oncogenesis, metastasis, myogenesis, muscle regeneration, neurite outgrowth, and fibrinolysis. This protein may also play a role in acute respiratory distress syndrome (ARDS) which, in part, is caused by enhanced clot formation and the suppression of fibrinolysis. Compared to other mammals, the cluster of plasminogen-like genes to which this gene belongs has been rearranged in catarrhine primates. [provided by RefSeq, May 2020]

Product images:



Circular map for RC208871



Western blot validation of overexpression lysate (Cat# [LY424815]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208871 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).