

Product datasheet for RC210399

Neutrophil Elastase (ELANE) (NM_001972) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Neutrophil Elastase (ELANE) (NM_001972) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Neutrophil Elastase
Synonyms:	ELA2; GE; HLE; HNE; NE; PMN-E; SCN1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210399 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGACCCTCGGCCCGGACTCGCGTGTCTTTTCTCGCCTGTGTCTGCCGGCCTTGCTGCTGGGGGCA
CCGCGCTGGCCTCGGAGATTGTGGGGGGCCGGCAGCGCGGCCCCACGCGTGGCCCTTCATGGTGTCCCT
GCAGCTGCGCGGAGGCCACTTCTCGGGCGCCACCCTGATTGCGCCCAACTTCGTCATGTCGGCCGCGCAC
TGCGTGGCGAATGTAACGTCCGCGGGTGCAGGTTGGTCTGGGAGCCATAACCTCTCGCGCGGGGAGC
CCACCCGGCAGGTGTTCCCGTGCAGCGCATCTCGAAAACGGCTACGACCCCGTAAACTTGCTCAACGA
CATCGTGATTCTCCAGCTCAACGGTTCGGCCACCATCAACGCCAACGTGCAGGTGGCCAGCTGCCGGCT
CAGGGACGCCGCTGGGCAACGGGTGCAGTGCCTGGCCATGGGCTGGGGCCTTCTGGGCAGGAACCGTG
GGATCGCCAGCGTCTGCAGGAGCTCAACGTGACGGTGGTACGTCCCTCTGCCGTGCGAGCAACGTCTG
CACTCTCGTGAGGGGCCGGCAGGCCGGCTGTGTTTCGGGGACTCCGGCAGCCCCTTGGTCTGCAACGGG
CTAATCCACGGAATTGCCTCCTTCGTCCGGGGAGGCTGCGCCTCAGGGCTCTACCCCGATGCCTTTGCC
CGGTGGCACAGTTGTAAACTGGATCGACTCTATCATCAACGCTCCGAGGACAACCCCTGTCCCCACC
CCGGGACCCGGACCCGGCCAGCAGGACCCAC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC210399 protein sequence
 Red=Cloning site Green=Tags(s)

MTLGRRLACLFLACVLPALLGGTALASEIVGRRRAPHAWPFMVSLQLRGGHFCGATLIAPNFVMSAAH
 CVANVNVRAVRVVLGAHNL SRREPTRQVFAVQRIFENGYDPVNLNDIVILQLNGSATINANVQVAQLPA
 QGRRLGNGVQCLAMGWLLGRNRGIASVLQELNVTVVVSLCRRSNVCTLVRGRQAGVCFGDSGSPVLCNG
 LIHGIA SFVRGGCASGLYPDAFAPVAQFVNWIDSIIQRSEDNCPHPRDPDPASRTH

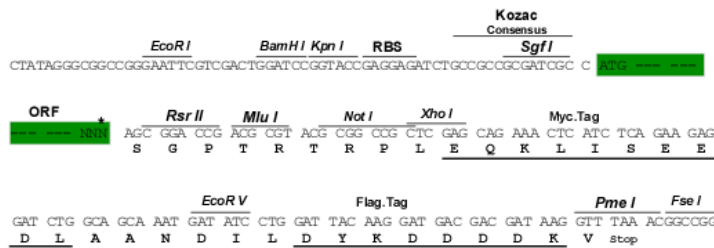
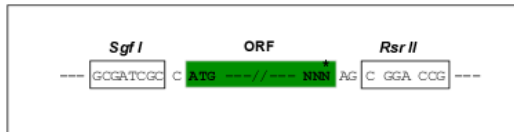
SGP TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6221_c08.zip

Restriction Sites: SgfI-RsrII

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001972

ORF Size: 801 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_001972.4](#)

RefSeq Size: 938 bp

RefSeq ORF: 804 bp

Locus ID: 1991

UniProt ID: [P08246](#)

Cytogenetics: 19p13.3

Domains: Tryp_SPc

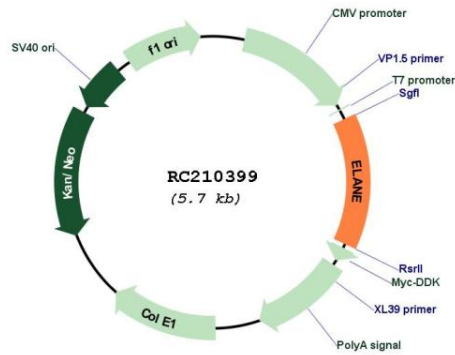
Protein Families: Protease, Transmembrane

Protein Pathways: Systemic lupus erythematosus

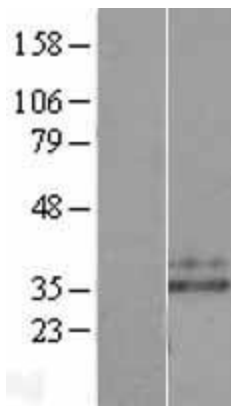
MW: 28.5 kDa

Gene Summary: Elastases form a subfamily of serine proteases that hydrolyze many proteins in addition to elastin. Humans have six elastase genes which encode structurally similar proteins. The encoded preproprotein is proteolytically processed to generate the active protease. Following activation, this protease hydrolyzes proteins within specialized neutrophil lysosomes, called azurophil granules, as well as proteins of the extracellular matrix. The enzyme may play a role in degenerative and inflammatory diseases through proteolysis of collagen-IV and elastin. This protein also degrades the outer membrane protein A (OmpA) of *E. coli* as well as the virulence factors of such bacteria as *Shigella*, *Salmonella* and *Yersinia*. Mutations in this gene are associated with cyclic neutropenia and severe congenital neutropenia (SCN). This gene is present in a gene cluster on chromosome 19. [provided by RefSeq, Jan 2016]

Product images:



Circular map for RC210399



Western blot validation of overexpression lysate (Cat# [LY419618]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210399 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).