

Product datasheet for RC206495

Granzyme B (GZMB) (NM_004131) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Granzyme B (GZMB) (NM_004131) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Granzyme B
Synonyms:	C11; CCPI; CGL-1; CGL1; CSP-B; CSPB; CTLA1; CTSL1; HLP; SECT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC206495 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCAACCAATCCTGCTTCTGCTGGCCTTCTCTGCTGCCAGGGCAGATGCAGGGGAGATCATCGGGG
GACATGAGGCCAAGCCCCACTCCCGCCCTACATGGCTTATCTTATGATCTGGGATCAGAAGTCTCTGAA
GAGGTGCGGTGGCTTCTGATACAAGACGACTTCGTGCTGACAGCTGCTCACTGTTGGGGAAGCTCCATA
AATGTCACCTTGGGGGCCACAATATCAAAGAACAGGAGCCGACCCAGCAGTTTATCCCTGTGAAAAGAC
CCATCCCCATCCAGCCTATAATCCTAAGAACTTCTCCAACGACATCATGCTACTGCAGCTGGAGAGAAA
GGCCAAGCGGACCAGAGCTGTGCAGCCCTCAGGCTACCTAGCAACAAGGCCAGGTGAAGCCAGGGCAG
ACATGCAGTGTGGCCGGCTGGGGCAGACGGCCCCCTGGGAAAACACTCACACACTACAAGAGGTGA
AGATGACAGTGCAGGAAGATCGAAAGTGCGAATCTGACTTACGCCATTATTACGACAGTACCATTGAGTT
GTGCGTGGGGGACCCAGAGATTAAGAAAGACTTCTTTAAGGGGGACTCTGGAGGCCCTCTTGTGTAAAC
AAGGTGGCCAGGGCATTGTCTCTATGGACGAAACAATGGCATGCCTCCACGAGCCTGCACAAAGTCT
CAAGCTTTGTACTACTGGATAAAGAAAACCATGAAACGCCAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC206495 protein sequence
 Red=Cloning site Green=Tags(s)

MQPILLLLLAFLLLPRADAGEIIGGHEAKPHSRPYMAYLMIWDQKSLKRCGGFLIQDDFVLTAAHCWGSSI
 NVTLGAHNIKEQEPTQQFIPVKRPIPHPAYNPKNFNDIMLLQLERKAKRTRAVQPLRLPSNKAQVKPGQ
 TCSVAGWGQTAPLGKHSHTLQEVKMTVQEDRKCESDLRHYYDSTIELCVGDPEIKKTSFKGDSGGPLVCN
 KVAQGIYSYGRNNGMPRACTKVSSFVHWIKKTMKRH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6015_d06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_004131

ORF Size: 741 bp

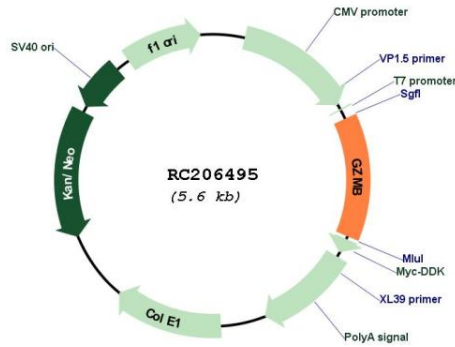
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

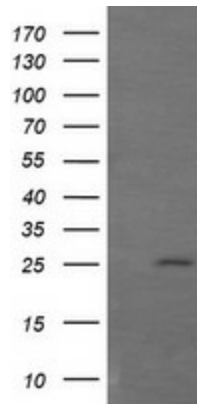
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<ol style="list-style-type: none">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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_004131.6
RefSeq Size:	941 bp
RefSeq ORF:	744 bp
Locus ID:	3002
UniProt ID:	P10144
Cytogenetics:	14q12
Domains:	Tryp_SPc
Protein Families:	Druggable Genome, Protease
Protein Pathways:	Allograft rejection, Autoimmune thyroid disease, Graft-versus-host disease, Natural killer cell mediated cytotoxicity, Type I diabetes mellitus
MW:	27.7 kDa
Gene Summary:	This gene encodes a member of the granzyme subfamily of proteins, part of the peptidase S1 family of serine proteases. The encoded preproprotein is secreted by natural killer (NK) cells and cytotoxic T lymphocytes (CTLs) and proteolytically processed to generate the active protease, which induces target cell apoptosis. This protein also processes cytokines and degrades extracellular matrix proteins, and these roles are implicated in chronic inflammation and wound healing. Expression of this gene may be elevated in human patients with cardiac fibrosis. [provided by RefSeq, Sep 2016]

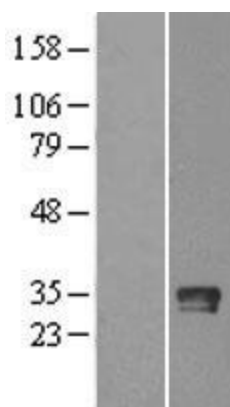
Product images:



Circular map for RC206495



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GZMB (Cat# RC206495, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-GZMB (Cat# [TA505930]). Positive lysates [LY401332] (100ug) and [LC401332] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401332]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206495 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).