

Product datasheet for **RC219169**

CHIT1 (NM_003465) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CHIT1 (NM_003465) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CHIT1
Synonyms:	CHI3; CHIT; CHITD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC219169 representing NM_003465
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGTGGGCTGTGGCCTGGGAGGTTTCATGGTCTGTGATGATCCCATGGGCTCTGTGCAAAAC
 TGGTCTGCTACTTCACCAACTGGGCCAGTACAGACAGGGGGAGGCTCGCTTCTGCCCAAGGACTTGGA
 CCCCAGCCTTTGCACCCACCTCATCTACGCCTTGCTGGCATGACCAACCACCAGCTGAGCACCCTGAG
 TGGAAATGACGAGACTCTCTACCAGGAGTTCAATGGCCTGAAGAAGATGAATCCCAAGCTGAAGACCTGT
 TAGCCATCGGAGGCTGGAATTTTCGGCACTCAGAAGTTCACAGATATGGTAGCCACGGCCAACAACCGTCA
 GACCTTTGTCAACTCGGCCATCAGGTTTCTGCGCAAATACAGCTTTGACGGCCTTGACCTTGACTGGGAG
 TACCCAGGAAGCCAGGGGAGCCCTGCCGTAGACAAGGAGCGCTTACAACCCTGGTACAGGACTTGGCCA
 ATGCCTTCCAGCAGGAAGCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGG
 GCAGACCTATGTGGATGTGGATACGAGGTGGACAAAATCGCCAGAACCTGGATTTTGTCAACCTTATG
 GCCTACGACTTCCATGGCTCTTGGGAGAAGGTCACGGGACATAACAGCCCTCTACAAGAGGCAAGAAG
 AGAGTGGTGCAGCAGCCAGCCTCAACGTGGATGCTGCTGTGCAACAGTGGCTGCAGAAGGGGACCCCTGC
 CAGCAAGCTGATCCTTGGCATGCCTACCTACGGACGCTCCTTCACTGGCCTCCTCATCAGACACCAGA
 GTGGGGGCCCCAGCCACAGGGTCTGGCACTCCAGGCCCTTACCAAGGAAGGAGGGATGCTGGCCTACT
 ATGAAGTCTGCTCCTGGAAGGGGGCCACCAAACAGAGAATCCAGGATCAGAAGGTGCCCTACATCTTCCG
 GGACAACCAAGTGGGTGGGCTTTGATGATGTGGAGAGCTTCAAACCAAGGTCAGCTATCTGAAGCAGAAG
 GGACTGGGCGGGCCATGGTCTGGCACTGGACTTAGATGACTTTGCCGGCTTCTCTGCAACCAGGGCC
 GATACCCCTCATCCAGACGCTACGGCAGGAAGTGAAGTCTCCATACTTGCCCTCAGGCACCCAGAGCT
 TGAAGTTCCAAAACCAAGGTCAGCCCTCTGAACCTGAGCATGGCCCCAGCCCTGGACAAGACACGTTCTGC
 CAGGGCAAAGCTGATGGGCTCTATCCAACTCCTCGGGAACGTTCCAGCTTCTACAGCTGTGCAGCGGGG
 GGCTGTCCAGCAAAGCTGCCCGACAGGCTGGTGTTCAGCAACTCCTGCAAATGCTGCACCTGGAAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC219169 representing NM_003465
 Red=Cloning site Green=Tags(s)

MVRSVAWAGFMVLLMIPWGSAAKLVCYFTNWAQYRQGEARFLPKDLDPSTLTHLIYAFAGMTNHQLSTTE
 WNDETLYQEFNGLKKNPKLKTLLAIGGWNFGTQKFTDMVATANNRQTFVNSAIRFLRKYSFDGLDLDWE
 YPGSQGSPAVDKERFTTLVQDLANAFQQAQTSKGERLLL SAAVPAGQTYVDAGYEVDKIAQNLDFVNL
 AYDFHGSWEKVTGHNSPLYKRQEESGAAASLNVDAAVQWLQKGT PASKLILGMPTYGRSFTLASSDTR
 VGAPATSGTGPFPFKEGMLAYEVCWSK GATKQRIQDQKVPYIFRDNQWVGFDDVESFKTKVSYLKQK
 GLGGAMVWALDLDFAGFSCNQGRYPLIQTLRQELSLPYLPSGTPELEVPKPGQPSEPEHGPSGQDTFC
 QGKADGLYPNPRERSSFYSCAAGRFLQQSCPTGLVFSNSCKCCTWN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6167_g10.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_003465

ORF Size: 1398 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_003465.3](#)

RefSeq Size: 1633 bp

RefSeq ORF: 1401 bp

Locus ID: 1118

UniProt ID: [Q13231](#)

Cytogenetics: 1q32.1

Domains: Glyco_18, CBM_14

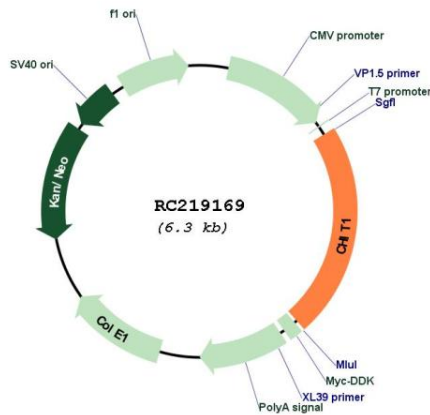
Protein Families: Secreted Protein, Transmembrane

Protein Pathways: Amino sugar and nucleotide sugar metabolism

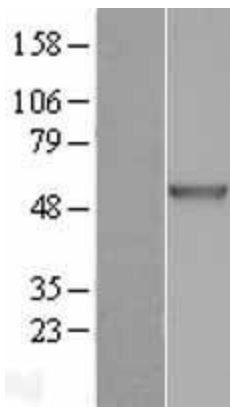
MW: 51.5 kDa

Gene Summary: Chitotriosidase is secreted by activated human macrophages and is markedly elevated in plasma of Gaucher disease patients. The expression of chitotriosidase occurs only at a late stage of differentiation of monocytes to activated macrophages in culture. Human macrophages can synthesize a functional chitotriosidase, a highly conserved enzyme with a strongly regulated expression. This enzyme may play a role in the degradation of chitin-containing pathogens. Several alternatively spliced transcript variants have been described for this gene. [provided by RefSeq, Jan 2012]

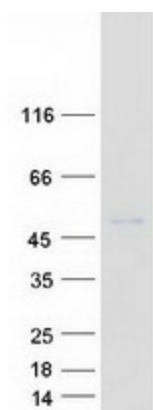
Product images:



Circular map for RC219169



Western blot validation of overexpression lysate (Cat# [LY401172]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219169 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CHIT1 protein (Cat# [TP319169]). The protein was produced from HEK293T cells transfected with CHIT1 cDNA clone (Cat# RC219169) using MegaTran 2.0 (Cat# [TT210002]).