PRF1 cDNA Clone – Perforin 1 (Pore Forming Protein) (Human)

PRODUCT OVERVIEW

Product Name	PRF1, cDNA Clone
Full Product Name	PRF1 cDNA Clone
Product Gene Name	PRF1 cdna clone
Sequence	atggcagccc gtctgctcct cctgggcatc cttctcctgc tgctgcccct gcccgtccct gccccgtgcc acacagccgc acgctcagag tgcaagcgca gccacaagtt cgtgcctggt gcatggctgg ccggggaggg tgtggacgtg accagcctcc gccgctcggg ctccttccca gtggacacac aaaggttcct gcggcccgac ggcacctgca ccctctgtga aaatgcccta caggagggca ccctccagcg cctgcctctg gcgctcacca actggcgggc ccagggctct ggctgccagc gccatgtaac cagggccaaa gtcagctcca ctgaagctgt ggcccgggat gcggctcgta gcatccgcaa cgactggaag gtcgggctgg acgtgactcc taagcccacc agcaatgtgc atgtgtctgt ggccggctca cactcacagg cagccaactt tgcagcccag aagacccacc aggaccagta cagcttcagc actgacacgg tggagtgccg cttctacagt ttccatgtgg tacacactcc cccgctgcac cctgacttca agagggccct cggggacctg ccccaccact tcaacgcctc cacccagccc gcctacctca ggcttatctc caactacggc acccacttca tccgggctgt ggagctgggt ggccgcatat cggccctcac tgccctgcgc acctgcgagc tggccctgga agggctcacg gacaacgagg tggaggactg cctgactgtc gaggcccagg tcaacatagg catccacggc agcatctctg ccgaagccaa ggcctgtgag gagaagaaga agaagcacaa gatgacggcc tccttccacc aaacctaccg ggagcgccat tcggaagtgg ttggcggcca tcacacctcc attaacgacc tgctgttcgg gatccaggcc gggcccgagc agtactcagc ctgggtaaac tcgctgcccg gcagccctgg cctggtggac tacaccctgg aacccctgca cgtgctgctg gacagccagg acccgcggcg ggaggcactg aggagggccc tgagtcagta cctgacggac agggctcgct ggagggactg cagccggccg tgcccaccag ggcggcagaa gagcccccga gacccatgcc agtgtgtgtg ccatggctca gcggtcacca cccaggactg ctgccctcgg cagaggggcc tggcccagct ggaggtgacc ttcatccaag catggggcct gtgggggac tggttcactg ccacggatgc ctatgtgaag ctcttctttg gtggccagga gctgaggacg agcaccgtgt gggacaataa caaccccatc tggtcagtgc ggctggattt tggggatgtg ctcctggcca caggggggcc cctgaggttg caggtctggg atcaggactc tggcagggac gatgacctcc ttggcacctg tgatcaggct cccaagtctg gttcccatga ggtgagatgc aacctgaatc atggccacct aaaattccgc tatcatgcca ggtgcttgcc ccacctggga ggaggcacct gcctggacta tgtcccccaa atgcttctgg gggagcctcc aggaaaccgg agtggggccg tgtggtga
Molecular Weight	61,377 Da
OMIM	170280
Vector	pENTR223.1 or pUC
Clone Sequence Report	Provided with product shipment
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for PRF1 cdna clone	MBS1267786 is a cDNA clone targeting PRF1.
Other Notes	Small volumes of PRF1 cdna clone vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PRF1. It may not necessarily be applicable to this product.

NCBI GI #	38649194
NCBI GeneID	5551
NCBI Accession #	BC063043
UniProt Secondary Accession #	Q59F57; Q86WX7; B2R6X4
UniProt Related Accession #	P14222
NCBI Official Full Name	Homo sapiens perforin 1 (pore forming protein), mRNA

NCBI Official Synonym Full Names	perforin 1
NCBI Official Symbol	PRF1
NCBI Official Synonym Symbols	P1; PFP; FLH2; PFN1; HPLH2
UniProt Protein Name	Perforin-1
UniProt Synonym Protein Names	Cytolysin; Lymphocyte pore-forming protein; PFP
Protein Family	Peptide chain release factor
UniProt Gene Name	PRF1
UniProt Synonym Gene Names	PFP; P1; PFP
UniProt Entry Name	PERF_HUMAN
NCBI Protein Information	perforin-1
NCBI Summary for PRF1	The protein encoded by this gene has structural and functional similarities to complement component 9 (C9). Like C9, this protein creates transmembrane tubules and is capable of lysing non-specifically a variety of target cells. This protein is one of the main cytolytic proteins of cytolytic granules, and it is known to be a key effector molecule for T-cell- and natural killer-cell-mediated cytolysis. Defects in this gene cause familial hemophagocytic lymphohistiocytosis type 2 (HPLH2), a rare and lethal autosomal recessive disorder of early childhood. Alternative splicing results in multiple transcript variants encoding the same protein. [provided by RefSeq, Jul 2008]
UniProt Comments for PRF1	PRF1: Plays a key role in secretory granule-dependent cell death, and in defense against virus-infected or neoplastic cells. Plays an important role in killing other cells that are recognized as non-self by the immune system, e.g. in transplant rejection or some forms of autoimmune disease. Can insert into the membrane of target cells in its calcium-bound form, oligomerize and form large pores. Promotes cytolysis and apoptosis of target cells by facilitating the uptake of cytotoxic granzymes. Monomer, as sobluble protein. Homooligomer. Oligomerization is required for pore formation. Repressed by contact with target cells. Belongs to the complement C6/C7/C8/C9 family. Protein type: Membrane protein, multi-pass Chromosomal Location of Human Ortholog: 10q22 Cellular Component: integral to membrane; membrane Molecular Function: calcium ion binding; protein binding; wide pore channel activity Biological Process: apoptosis; cellular defense response; cytolysis; defense response to tumor cell; defense response to virus; formation of immunological synapse; immune response to tumor cell; protein homooligomerization Disease: Aplastic Anemia; Hemophagocytic Lymphohistiocytosis, Familial, 2; Lymphoma, Non-hodgkin, Familial
Research Articles on PRF1	**1.** A new heterozygous mutation (c.916G>A and c.65delC) was identified as familial hemophagocytic lymphohistiocytosis type 2 causing defect.
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