

Perforin 1 (PRF1) Active Protein | PRF1 active protein

Active Perforin 1 (PRF1)

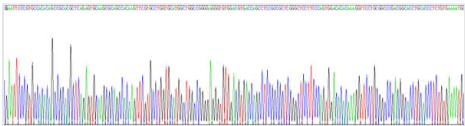
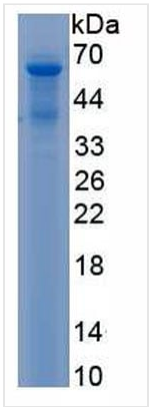
CATALOG # AAA152021	HOST E. coli	REACTIVITY Homo sapiens (Human)	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Perforin 1 (PRF1); Active Perforin 1 (PRF1); PRF1/Perforin 1; FLH2; HPLH2; P1; PFP; Pore Forming Protein; Cytolysin; Lymphocyte pore-forming protein; PRF1 active protein

PRODUCT SPECIFICATIONS

Host	E. coli
Reactivity	Homo sapiens (Human)
Purity/Purification	>80%
Form/Format	20mM Tris, 150mM NaCl, pH8.0, containing 0.01% skl, 5% Trehalose.
Concentration	Original Concentration: 350ug/mL (varies by lot)
Applicable Applications for PRF1 active protein	Activity Assay, Cell Culture
Source	Prokaryotic expression.
Residues	Pro22~Trp555
Tags	N-terminal His-tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method).
Predicted isoelectric point	7.8
Usage	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Preparation and Storage	Storage: Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.



Gene Sequencing
Gene Sequencing (extract)

SDS_PAGE



Bioactivity

Perforin 1 (PRF1) is a pore forming cytolytic protein found in the granules of cytotoxic T lymphocytes (CTLs) and NK cells. Upon degranulation, perforin binds to the target cell's plasma membrane, and oligomerises in a Ca²⁺ dependent manner to form pores on the target cell. The pore formed allows for the passive diffusion of a family of pro-apoptotic proteases, known as the granzymes, into the target cell. The activity of recombinant PRF1 was measured by lysis of erythrocytes using a hemolysis assay. A general procedure is as follows: two-fold dilute the recombinant human PRF1 with 0.9% NaCl, add 50ul a serial dilution of PRF1, 10ul 0.1M CaCl₂ to each well, then add 50ul 0.25% rabbit erythrocyte (RaE) to each well and mixed gently. Add 50ul 0.9% NaCl to reapeace PRF1 in control wells. The plate is incubated for 20 hours at 37 degree C, 5% CO₂. The results are shown in Figure 2. It was obvious that the minimal effective concentration of PRF1 is 2.5ug/ml. Figure 1. Hemolysis activity of recombinant human PRF1(A) 0.25% RaE treated with 2.5ug/ml PRF1 for 20h;(B) 0.25% RaE treated with without PRF1.

Sequence

PCHTAARSE CKRSHKFVPG AMLAGEGVDV
TSLRRSGSFP VDTQRFLRPD GTCTLCENAL QEGTLQRLPL ALTNWRAQGS
GCQRHVTRAK VSSTEAVARD AARSIRNDWK VGLDVT PKPT SNVHVSAGS
HSQAANFAAQ KTHQDQYSFS TDTVECRFYS FHVVHTPPLH PDFKRALGDL
PHHFNASTQP AYLRLLISNYG THFIRAVELG GRISALTALR TCELALEGLT
DNEVEDCLTV EAQVNIIGIHG SISAEAKACE EKKKKHKMTA SFHOTYRERH
SEVVGGHHTS INDLLFGIQA GPEQYSAWVN SLPGSPGLVD YITLEPLHVLL
DSQDPRREAL RRALSQYLTD RARWRDCSRP CPPGRQKSPR DPCQCVCCHGS
AVTTQDCCPR QRGLAQLEVT FIQAWGLWGD WFTATDAYVK LFFGGQELRT
STVMDNNNPI WSVRLDFGDV LLATGGPLRL QVMDQDSGRD DDLLGTCDQA
PKSGSHEVRC NLNHGHLKFR YHARCLPHLG GGTCLDYVPQ MLLGEPPGNR
SGAVW

ADDITIONAL INFORMATION

Product Categories/Family for PRF1 active protein	Immune molecule; Active proteins/AP
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NCBI AND UNIPROT INFORMATION

NCBI GI #	133908621
NCBI GeneID	5551
NCBI Accession #	NP_001076585.1
NCBI GenBank Nucleotide #	NM_001083116.1
UniProt Accession #	P14222; Q59F57; Q86WX7; B2R6X4
Molecular Weight	Predicted Molecular Mass: 62.9kDa Accurate Molecular Mass: 63kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	perforin-1
NCBI Official Synonym Full Names	perforin 1 (pore forming protein)
NCBI Official Symbol	PRF1
NCBI Official Synonym Symbols	P1; PFP; FLH2; PFN1; HPLH2

NCBI Protein Information	perforin-1; cytolyisin; lymphocyte pore forming protein; lymphocyte pore-forming protein
UniProt Protein Name	Perforin-1
UniProt Gene Name	PRF1
UniProt Synonym Gene Names	PFP; P1; PFP
UniProt Entry Name	PERF_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-homo-sapiens-human-active-protein/perforin-1-prf1/152021>