

Perforin 1 (PRF1) Active Protein | PRF1 active protein

Active Perforin 1 (PRF1)

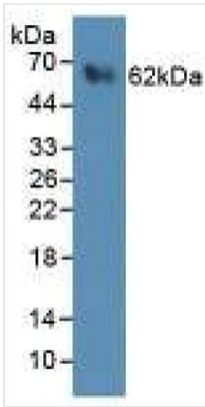
CATALOG # AAA21142	HOST E. coli	REACTIVITY Homo sapiens (Human)	APPLICATIONS Cell Culture, Activity Assay
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PRODUCT SYNONYMS

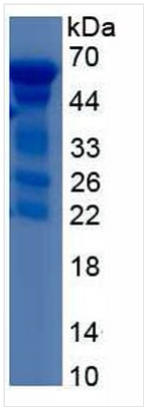
Perforin 1 (PRF1); Active Perforin 1 (PRF1); PRF1 active protein

PRODUCT SPECIFICATIONS

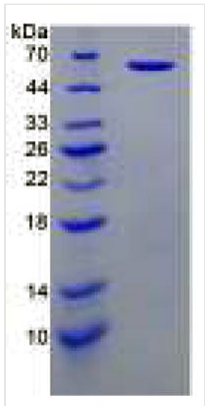
Host	E. coli
Reactivity	Homo sapiens (Human)
Purity/Purification	>80%
Form/Format	20mM Tris, 150mM NaCl, pH8.0, containing 0.01% skl, 5% Trehalose.
Concentration	Original Concentration: 600ug/mL (varies by lot)
Applicable Applications for PRF1 active protein	Cell Culture, Activity Assay
Application Notes	(May be suitable for use in other assays to be determined by the end user.)
Source	Prokaryotic expression.
Residues	Lys32~Phe316
Tags	Two N-terminal Tags, His-tag and GST-tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method).
Predicted isoelectric point	7.7
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.



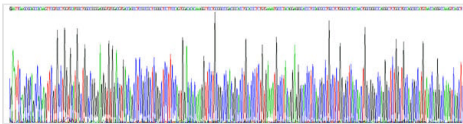
WB (Western Blot)
Sample: Recombinant PRF1, Human;Antibody: Rabbit Anti-Human PRF1 Ab



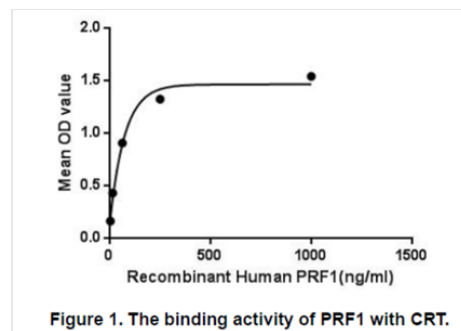
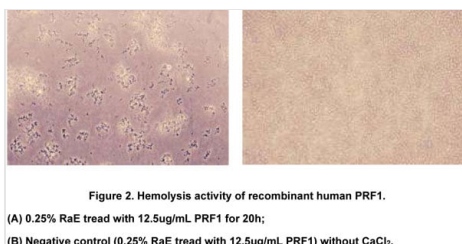
SDS-PAGE
Sample: Active recombinant PRF1, Human



SDS-PAGE
Sample: Active recombinant PRF1, Human



Gene Sequencing (extract)



Activity

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. Besides, Calreticulin (CRT) has been identified as an interactor of PRF1, thus a binding ELISA assay was conducted to detect the interaction of recombinant human PRF1 and recombinant human CRT. Briefly, PRF1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to CRT-coated microtiter wells and incubated for 2h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-PRF1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50uL stop solution to the wells and read at 450nm immediately. The binding activity of PRF1 and CRT was shown in Figure 1, and this effect was in a dose dependent manner. 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 10uL 0.9% NaCl to replace CaCl₂ 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 12.5ug/mL.

ADDITIONAL INFORMATION

Product Categories/Family for PRF1 active protein	Immune molecule
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NCBI AND UNIPROT INFORMATION

NCBI GI #	133908621
NCBI GeneID	5551
NCBI Accession #	NP_001076585.1
NCBI GenBank Nucleotide #	NM_001083116.3
UniProt Accession #	P14222
Molecular Weight	Predicted Molecular Mass: 61.5kDa Accurate Molecular Mass: 62kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	perforin-1
NCBI Official Synonym Full Names	perforin 1
NCBI Official Symbol	PRF1
NCBI Official Synonym Symbols	P1; PFP; HPLH2
NCBI Protein Information	perforin-1
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-prf1/21142>