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Anti-Perforin Picoband Antibody

Catalog # ABO11852

Product Information

Application	WB
Primary Accession	P14222
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Perforin-1(PRF1) detection. Tested with WB in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	5551
Other Names	Perforin-1, P1, Cytolysin, Lymphocyte pore-forming protein, PFP, PRF1, PFP
Calculated MW	61377
Application Details	Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Cytoplasmic granule lumen. Secreted. Cell membrane; Multi-pass membrane protein. Endosome lumen. Stored in cytoplasmic granules of cytolytic T-lymphocytes and secreted into the cleft between T-lymphocyte and target cell. Inserts into the cell membrane of target cells and forms pores. Membrane insertion and pore formation requires a major conformation change. May be taken up via endocytosis involving clathrin-coated vesicles and accumulate in a first time in large early endosomes.
Source	Eukaryota
Protein Name	Perforin-1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived human Perforin recombinant protein (Position: E175-W555). Human Perforin shares 68% amino acid (aa) sequence identity with both mouse and rat Perforin.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins

Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the complement C6/C7/C8/C9 family.

Protein Information

Name	PRF1
Synonyms	PFP
Function	Pore-forming protein that plays a key role in granzyme- mediated programmed cell death, and in defense against virus-infected or neoplastic cells (PubMed:20889983, PubMed:21037563, PubMed:24558045, PubMed:9058810, PubMed:9164947). 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 (PubMed:9058810). Can insert into the membrane of target cells in its calcium-bound form, oligomerize and form large pores (PubMed:20889983, PubMed:21037563). Promotes cytolysis and apoptosis of target cells by mediating the passage and uptake of cytotoxic granzymes (PubMed:20038786, PubMed:20225066, PubMed:24558045, PubMed:32299851). Facilitates the delivery of cationic cargo protein, while anionic or neural proteins are not delivered efficiently (PubMed:24558045). Perforin pores allow the release of mature caspase-7 (CASP7) into the extracellular milieu (By similarity).
Cellular Location	Cytolytic granule. Secreted. Cell membrane; Multi-pass membrane protein. Endosome lumen. Note=Stored in cytolytic granules of cytolytic T-lymphocytes and secreted into the cleft between T- lymphocyte and target cell (PubMed:20038786). Inserts into the cell membrane of target cells and forms pores (PubMed:20889983). Membrane insertion and pore formation requires a major conformation change (PubMed:20889983). May be taken up via endocytosis involving clathrin- coated vesicles and accumulate in a first time in large early endosomes (PubMed:20038786).

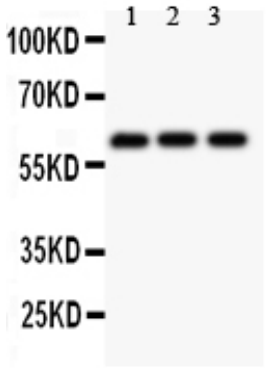
Background

PRF1, also known as Perforin-1, is a protein that in humans is encoded by the PRF1 gene. It is mapped to 10q22.1. PRF1 is a cytolytic protein found in the granules of Cytotoxic T lymphocytes (CTLs) and NK cells. Upon degranulation, PRF1 inserts itself into the target cell's plasma membrane, forming a pore. The lytic membrane-inserting part of perforin is the MACPF domain. This region shares homology with cholesterol-dependent cytolysins from Gram-positive bacteria. PRF1 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. PRF1 is thought to act by creating holes in the plasma membrane which triggers an influx of calcium and initiates membrane repair mechanisms. These repair mechanisms bring perforin and granzymes into early endosomes.

Images

Anti-Perforin Picoband antibody, ABO11852-1.jpgAll lanes: Anti Perforin (ABO11852) at 0.5ug/mlWB: Recombinant Human Perforin Protein 0.5ngPredicted bind size: 40KDObserved bind size: 40KD





Anti-Perforin Picoband antibody, ABO11852-2.jpgAll lanes: Anti Perforin (ABO11852) at 0.5ug/mlLane 1: HELA Whole Cell Lysate at 40ugLane 2: COLO320 Whole Cell Lysate at 40ugLane 3: HEPG2 Whole Cell Lysate at 40ugPredicted bind size: 61KD Observed bind size: 61KD

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