Overview

Product name: Anti-Perforin antibody [5B10], prediluted
Description: Mouse monoclonal [5B10] to Perforin, prediluted
Host species: Mouse
Tested applications: Suitable for: IHC-P
Species reactivity: Reacts with: Human
Immunogen: Recombinant fragment corresponding to the C terminal region of human Perforin.
Positive control: Lymphoma tissue

Properties

Form: Prediluted
Storage instructions: Shipped at 4°C. Store at +4°C.
Storage buffer: pH: 7.60
Preservative: 0.098% Sodium azide
Constituent: 0.79% Tris HCl
Stabilizing agent:

Purity: Tissue culture supernatant
Clonality: Monoclonal
Clone number: 5B10
Isotype: IgG1

Applications

Our Abpromise guarantee covers the use of ab75573 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<td>Use at an assay dependent concentration.</td>
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Function
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.

Involvement in disease
Defects in PRF1 are the cause of hemophagocytic lymphohistiocytosis familial type 2 (FHL2) [MIM:603553]; also known as HPLH2. Familial hemophagocytic lymphohistiocytosis (FHL) is a genetically heterogeneous, rare autosomal recessive disorder. It is characterized by immune dysregulation with hypercytokinemia and defective natural killer cell function. The clinical features of the disease include fever, hepatosplenomegaly, cytopenia, hypertriglyceridemia, hypofibrinogenemia, and neurological abnormalities ranging from irritability and hypotonia to seizures, cranial nerve deficits, and ataxia. Hemophagocytosis is a prominent feature of the disease, and a non-malignant infiltration of macrophages and activated T lymphocytes in lymph nodes, spleen, and other organs is also found.

Sequence similarities
Belongs to the complement C6/C7/C8/C9 family.
Contains 1 C2 domain.
Contains 1 EGF-like domain.
Contains 1 MACPF domain.

Domain
The C2 domain mediates calcium-dependent binding to lipid membranes. A subsequent conformation change leads to membrane insertion of beta-hairpin structures and pore formation. The pore is formed by transmembrane beta-strands.

Post-translational modifications
N-glycosylated.

Cellular localization
Cytoplasmic granule lumen. Secreted. Cell membrane. 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.

Images
Formalin-fixed, paraffin-embedded human lymphoma stained with neat ab75573, using peroxidase-conjugate and AEC chromogen. Note granular cytoplasmic staining of lymphocytes.
Immunohistochemical analysis of Human skin tissue, staining Perforin with ab75573.

Tissue was fixed with paraformaldehyde and permeabilized with Tween-20; antigen retrieval was by heat mediation in Tris-EDTA buffer. Samples were incubated with primary antibody (undiluted) for 30 minutes at 20°C. An undiluted HRP-conjugated goat anti-mouse polyclonal IgG was used as the secondary antibody.

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