Product datasheet

Anti-Perforin antibody [CB5.4] ab16074

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Overview

Product name  Anti-Perforin antibody [CB5.4]
Description  Rat monoclonal [CB5.4] to Perforin
Host species  Rat
Tested applications  Suitable for: IP, ICC, WB, IHC-Fr, IHC-P, ICC/IF
Species reactivity  Reacts with: Mouse
Immunogen  Recombinant fragment, corresponding to amino acids 98 - 534 of Mouse Perforin.
Epitope  This antibody recognizes mouse perforin, region amino acids 402-534.
General notes  This product was changed from ascites to tissue culture supernatant on 31st May 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form  Liquid
Storage instructions  Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer  Preservative: 0.02% Sodium azide
                Constituent: PBS
Purity  Tissue culture supernatant
Clonality  Monoclonal
Clone number  CB5.4
Isotype  IgG2a

Applications
The Abpromise guarantee

Our Abpromise guarantee covers the use of ab16074 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>IP</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<td>ICC</td>
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<td>Use at an assay dependent concentration.</td>
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<td>WB</td>
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<td>IHC-Fr</td>
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<td>IHC-P</td>
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<tr>
<td>ICC/IF</td>
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<td>Use at an assay dependent concentration.</td>
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Target

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


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.
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