Product datasheet

Anti-C3d antibody [7C10] ab17453

Overview

Product name: Anti-C3d antibody [7C10]
Description: Mouse monoclonal [7C10] to C3d
Host species: Mouse
Specificity: This product is specific to C3d, but also C3b and iC3b, since C3d is a product from C3b.

Tested applications: Suitable for: IHC, ELISA, WB, Flow Cyt
Species reactivity: Reacts with: Human
Immunogen: Full length native protein (purified) corresponding to Human C3d.
Epitope: Epitope specificity differs from that of ab17455.
Positive control: IHC-P: Human kidney tissue.

Properties

Form: Liquid
Storage buffer: pH: 7.40
Preservative: 0.098% Sodium azide
 Constituents: PBS, 2.9% Sodium chloride
Purity: Protein A purified
Clonality: Monoclonal
Clone number: 7C10
Myeloma: x63-Ag8.653
Isotype: IgG1
Light chain type: kappa

Applications

Our Abpromise guarantee covers the use of ab17453 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function
C3 plays a central role in the activation of the complement system. Its processing by C3 convertase is the central reaction in both classical and alternative complement pathways. After activation C3b can bind covalently, via its reactive thioester, to cell surface carbohydrates or immune aggregates. Derived from proteolytic degradation of complement C3, C3a anaphylatoxin is a mediator of local inflammatory process. It induces the contraction of smooth muscle, increases vascular permeability and causes histamine release from mast cells and basophilic leukocytes.

Tissue specificity
Plasma.

Involvement in disease
Defects in C3 are the cause of complement component 3 deficiency (C3D) [MIM:613779]. A rare defect of the complement classical pathway. Patients develop recurrent, severe, pyogenic infections because of ineffective opsonization of pathogens. Some patients may also develop autoimmune disorders, such as arthralgia and vasculitic rashes, lupus-like syndrome and membranoproliferative glomerulonephritis.
Genetic variation in C3 is associated with susceptibility to age-related macular degeneration type 9 (ARMD9) [MIM:611378]. ARMD is a multifactorial eye disease and the most common cause of irreversible vision loss in the developed world. In most patients, the disease is manifest as ophthalmoscopically visible yellowish accumulations of protein and lipid that lie beneath the retinal pigment epithelium and within an elastin-containing structure known as Bruch membrane.
Defects in C3 are a cause of susceptibility to hemolytic uremic syndrome atypical type 5 (AHUS5) [MIM:612925]. An atypical form of hemolytic uremic syndrome. It is a complex genetic disease characterized by microangiopathic hemolytic anemia, thrombocytopenia, renal failure and absence of episodes of enterocolitis and diarrhea. In contrast to typical hemolytic uremic syndrome, atypical forms have a poorer prognosis, with higher death rates and frequent progression to end-stage renal disease. Note=Susceptibility to the development of atypical hemolytic uremic syndrome can be conferred by mutations in various components of or regulatory factors in the complement cascade system. Other genes may play a role in modifying the phenotype.

Sequence similarities
Contains 1 anaphylatoxin-like domain.
Contains 1 NTR domain.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF</td>
<td></td>
<td>1/10.</td>
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<tr>
<td>IHC</td>
<td></td>
<td>1/10.</td>
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<tr>
<td>ELISA</td>
<td>1/30000.</td>
<td>Strong reaction is seen in ELISA with a C3 coat or when used as detection antibody in sandwich ELISA in combination with a polyclonal C3 antibody. ab17453 also reacts with C3b deposited on coated antibody molecules.</td>
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<tr>
<td>WB</td>
<td>Use at an assay dependent concentration. Predicted molecular weight: 187 kDa. In Western blotting after SDS-PAGE, ab17453 reacts with C3 in both reduced and unreduced forms.</td>
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<td>Flow Cyt</td>
<td>⭐⭐⭐⭐️</td>
<td>Use at an assay dependent concentration. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.</td>
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</table>
**Post-translational modifications**

C3b is rapidly split in two positions by factor I and a cofactor to form iC3b (inactivated C3b) and C3f which is released. Then iC3b is slowly cleaved (possibly by factor I) to form C3c (beta chain + alpha' chain fragment 1 + alpha' chain fragment 2), C3dg and C3f. Other proteases produce other fragments such as C3d or C3g. Phosphorylation sites are present in the extracellular medium.

**Cellular localization**

Secreted.

**Images**

Immunohistochemical analysis of human kidney labelling C3d with ab17453 at a dilution of 1/10. Plasma of veins were stained strongly.

Immunofluorescent analysis of human kidney labelling C3d with ab17453 at a dilution of 1/10. Plasma of veins were stained strongly.

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**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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