Anti-C1q antibody [JL-1] ab71940

**Overview**

<table>
<thead>
<tr>
<th>Product name</th>
<th>Anti-C1q antibody [JL-1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Mouse monoclonal [JL-1] to C1q</td>
</tr>
<tr>
<td>Host species</td>
<td>Mouse</td>
</tr>
<tr>
<td>Tested applications</td>
<td>Suitable for: ICC/IF, ELISA, Functional Studies, WB, IHC-Fr, IHC-FoFr, ICC</td>
</tr>
<tr>
<td>Species reactivity</td>
<td>Reacts with: Mouse, Rat, Human</td>
</tr>
<tr>
<td>Immunogen</td>
<td>Purified mouse C1q</td>
</tr>
<tr>
<td>Epitope</td>
<td>The monoclonal antibody JL-1 is reactive with the collagen-like region (CLR).</td>
</tr>
<tr>
<td>Positive control</td>
<td>Spleen and kidney tissue of wild-type mice.</td>
</tr>
<tr>
<td>General notes</td>
<td>The antibody has been generated by immunization of C1q-/ C57BL/6 mice with purified mouse C1q.</td>
</tr>
</tbody>
</table>

**Properties**

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage instructions</td>
<td>Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.</td>
</tr>
<tr>
<td>Storage buffer</td>
<td>Constituents: 0.1% BSA, PBS</td>
</tr>
<tr>
<td>Purity</td>
<td>Protein G purified</td>
</tr>
<tr>
<td>Purification notes</td>
<td>0.2µm filtered.</td>
</tr>
<tr>
<td>Clonality</td>
<td>Monoclonal</td>
</tr>
<tr>
<td>Clone number</td>
<td>JL-1</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG2b</td>
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</table>

**Applications**

Our **Abpromise guarantee** covers the use of **ab71940** 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>
</tr>
</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>
C1q associates with the proenzymes C1r and C1s to yield C1, the first component of the serum complement system. The collagen-like regions of C1q interact with the Ca(2+)-dependent C1r(2)C1s(2) proenzyme complex, and efficient activation of C1 takes place on interaction of the globular heads of C1q with the Fc regions of IgG or IgM antibody present in immune complexes.

**Involvement in disease**
Defects in C1QA are a cause of complement component C1q deficiency (C1QD) [MIM:613652]. A rare defect resulting in C1 deficiency and impaired activation of the complement classical pathway. C1 deficiency generally leads to severe immune complex disease with features of systemic lupus erythematosus and glomerulonephritis.

**Sequence similarities**
Contains 1 C1q domain. 
Contains 1 collagen-like domain.

**Post-translational modifications**
O-linked glycans consist of Glc-Gal disaccharides bound to the oxygen atom of post-translationally added hydroxyl groups.

**Cellular localization**
Secreted.

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### Application

**ELISA**
Use at an assay dependent concentration.

**Functional Studies**
Use at an assay dependent concentration. JL-1 was administered to mice resulting in depletion of circulating C1q, glomerular deposition of C1q and induction of anti-C1q autoantibodies in susceptible mice. As a negative control an isotype matched monoclonal antibody was used.

**WB**
1/50. Predicted molecular weight: 26 kDa.

**IHC-Fr**
Use at an assay dependent concentration.

**IHC-FoFr**
Use at an assay dependent concentration.

**ICC**
Use at an assay dependent concentration.

### Target

**Function**
C1q associates with the proenzymes C1r and C1s to yield C1, the first component of the serum complement system. The collagen-like regions of C1q interact with the Ca(2+)-dependent C1r(2)C1s(2) proenzyme complex, and efficient activation of C1 takes place on interaction of the globular heads of C1q with the Fc regions of IgG or IgM antibody present in immune complexes.

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**Post-translational modifications**
O-linked glycans consist of Glc-Gal disaccharides bound to the oxygen atom of post-translationally added hydroxyl groups.

**Cellular localization**
Secreted.
ab71940 staining C1q in rat spleen tissue by Immunohistochemistry (Frozen sections). Tissue was fixed in paraformaldehyde, blocked with 10% serum for 30 minutes at 24°C then incubated with ab71940 at a 1/50 dilution for 16 hours at 4°C. The secondary used was an Alexa-Fluor 488 conjugated goat anti-mouse polyclonal used at a 1/1000 dilution.

ab71940 staining C1q in mouse liver tissue sections by Immunohistochemistry (PFA perfusion fixed frozen sections). Tissue samples were fixed by perfusion with paraformaldehyde, cut into 20 micron slices, permeabilized with 0.1 M PBS with 3% Triton X and blocked with 10% serum for 60 minutes at 24°C. The sample was incubated with primary antibody (1/100 in 0.3M PBST with 10% donkey serum) at 4°C for 24 hours. An Alexa Fluor® 488-conjugated donkey monoclonal (1/1000) was used as the secondary antibody.

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

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