Anti-hCD20–hIgG1
Monoclonal human IgG1 antibody against human CD20
Catalog # hcd20-mab1
For research use only, not for diagnostic or therapeutic use
Version # 16C23-MM

PRODUCT INFORMATION
Content: 100 µg purified anti-hCD20-hIgG1 antibody, provided azide-free and lyophilized.

Isotype: Human IgG1

Formulation: 0.2 µm filtered solution in 68 mM phosphate buffer with 91 mM glycine, 5% w/v saccharose and stabilizing agents.

Antibody resuspension
Add 1 ml of sterile water to obtain a concentration of 0.1 mg/ml.

Storage
- Product is shipped at room temperature. Store lyophilized antibody at -20 °C. Lyophilized product is stable for 2 years at -20 °C.
- Reconstituted antibody is stable for 1 month when stored at 4 °C and for 1 year when aliquoted and stored at -20 °C. Avoid repeated freeze-thaw cycles.

DESCRIPTION
Anti-hCD20-hIgG1 features the constant region of the human IgG1 isotype and the variable region of rituximab. Rituximab is a mouse/human chimeric monoclonal antibody that targets the CD20 antigen found on the surface of malignant and normal B lymphocytes. Binding of rituximab to CD20 results in cell destruction through different mechanisms including direct signaling of apoptosis, complement activation and cell-mediated cytotoxicity. Rituximab has been approved by the FDA for the treatment of various lymphoid malignancies, including B-cell non-Hodgkin's lymphoma and B-cell chronic lymphocytic leukemia.

Human IgG1 is the most abundant immunoglobulin present in serum and binds with high affinity to the Fc receptor on phagocytic cells. The human IgG1 isotype displays high antibody-dependent cell-mediated cytotoxicity (ADCC) and complement-dependent cytotoxicity (CDC).

Anti-hCD20-hIgG1 was generated by recombinant DNA technology. It has been produced in CHO cells and purified by affinity chromatography with protein G/agarose.

APPLICATIONS
Anti-hCD20-hIgG1 targets the human CD20 antigen found on the surface of malignant and normal B lymphocytes.

ANTIBODY ISOTYPE COLLECTION
For your research, InvivoGen provides an anti-hCD20 isotype collection. This collection consists of monoclonal antibodies comprising the variable region of rituximab, and the constant region of the most common human and murine isotypes; eight in humans (IgG1, IgG2, IgG3, IgG4, IgM, IgA1, IgA2, IgE) and three in mice (IgG1, IgG2a, IgA). The isotypes differ in their functional locations and effector functions, such as complement-dependent cytotoxicity (CDC) and antibody-dependent cell-mediated cytotoxicity (ADCC), as presented in the table below.

<table>
<thead>
<tr>
<th>Name</th>
<th>Types</th>
<th>Description</th>
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| IgG  | 4     | Major Ig in serum, placental transfer  
        CDC (hIgG3>hIgG1>hIgG2>hIgG4; mIgG2a>mIgG1)  
        ADCC (hIgG1>hIgG3>hIgG2>hIgG4; mIgG2a>mIgG1) |
| IgM  | 1     | Third most common serum Ig, first Ig to be made  
        Good CDC, some ADCC |
| IgA  | 2     | Major class in secretions, second most common serum Ig  
        monomer in serum, dimer in secretions. No CDC, some ADCC |
| IgE  | 1     | Least common serum Ig, involved in allergic reaction  
        Strong binding to Fc receptors on basophils, no CDC |

RELATED PRODUCTS

<table>
<thead>
<tr>
<th>Product</th>
<th>Catalog Code</th>
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<tr>
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<td>hcd20-mab10</td>
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<td>Anti-hCD20-mIgA</td>
<td>hcd20-mab11</td>
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An anti-hTNF-α (adalimumab) isotype collection is also available, for more information visit www.invivogen.com/antibody-isotypes