**Technical Data Sheet**

**Purified Mouse Anti-Human CDw93 (C1qRp)**

**Product Information**

- **Material Number:** 551454
- **Alternate Name:** C1qRp
- **Size:** 0.1 mg
- **Concentration:** 0.5 mg/ml
- **Clone:** R3
- **Immunogen:** C1q-binding protein
- **Isotype:** Mouse IgM, κ
- **Reactivity:** QC Testing: Human
- **Storage Buffer:** Aqueous buffered solution containing <0.09% sodium azide.

**Description**

The immunogen used to raise R3 was C1q-binding protein preparation as described. Human C1qRp is a 631 a.a. protein (~66.5 kD) protein that is highly expressed on monocytes/macrophages, neutrophil granulocytes but not on T and B lymphocytes. C1qRp binds C1q, the recognition subunit of the first component (C1) of the complement pathway, as well as MBL (Mannose-binding lectin) and SPA (Pulmonary Surfactant Protein A). Human C1qRp is involved in the C1q-mediated enhancement of phagocytosis. R3 is suitable to detect C1qRp expression on cells of myeloid lineage by flow cytometry, C1qRp in cellular lysates by Western blotting or immunoprecipitation. Pretreatment of monocytes with R3 neutralizes C1q-mediated enhancement of phagocytosis. In addition, when immobilized, R3 mimics C1q- MBL- or SPA-mediated enhancement of phagocytosis as reported.

CDw93 (C1qRp) has been reported to define a human stem cell population with hematopoietic and hepatic potential.

**Expression of C1qRp by unstimulated human peripheral blood mononuclear cells (PBMC).** Human PBMC were stained with mouse anti-human C1qRp antibody (R3, Cat. No. 551454) by using BD Biosciences Pharmingen’s staining protocol. A histogram overlay shows specific cell staining of gated monocytes with R3 (0.125 µg) followed by biotin-goat-anti-mouse secondary antibody (Cat. No. 550337) and Streptavidin PE (Cat. No. 554061) compared to isotype control.

**Preparation and Storage**

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at 4°C.

**Application Notes**

**Application**

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<th>Application</th>
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<tbody>
<tr>
<td>Flow cytometry</td>
<td>Routinely Tested</td>
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<tr>
<td>Immunoprecipitation</td>
<td>Reported</td>
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<tr>
<td>Western blot</td>
<td>Reported</td>
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**Recommended Assay Procedure:**

**Immunofluorescent Staining and Flow Cytometric Analysis:** The staining technique and blocking controls are described in detail by C. Prussin and D. Metcalfe. A suitable mouse IgM, κ isotype control (Cat. No. 555581) for assessing the level of background staining on human cells is recommended: use at comparable concentrations to antibody of interest (eg, ≤ 0.5 µg Ab/1 million cells) (see Figure). For specific methodology, please visit the protocols section or chapter on intracellular staining in the Immune Function Handbook, both of which are posted on our web site, www.bdbiosciences.com.

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Western Blotting and immunoprecipitation: When run under non-reducing conditions, Human C1qRp migrates as a 100 kDa protein; due to high level of glycosylation C1qR migrates as 126 kDa under reducing conditions. The R3 antibody is suitable to detect C1qRp by Western blotting and immunoprecipitation as described; however, the antibody is not tested for this application at BD Biosciences Pharmingen. Reactivity of the antibody with the reduced protein is dramatically decreased.

Modulation of monocyte phagocytic activity: Pretreatment of monocytes with R3 neutralizes C1q-mediated enhancement of phagocytosis. In addition, when immobilized, R3 mimics C1q- MBL- or SPA-mediated enhancement of phagocytosis; however, the antibody is not tested for this application at BD Biosciences Pharmingen.

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>555581</td>
<td>Purified Mouse IgM, κ Isotype Control</td>
<td>0.1 mg</td>
<td>G155-228</td>
</tr>
<tr>
<td>550337</td>
<td>Biotin Goat Anti-Mouse Ig (Multiple Adsorption)</td>
<td>1.0 ml</td>
<td>Polyclonal</td>
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<tr>
<td>554061</td>
<td>PE Streptavidin</td>
<td>0.5 mg</td>
<td>(none)</td>
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Nepomuceno RR, Tenner AJ. C1qRP, the C1q receptor that enhances phagocytosis, is detected specifically in human cells of myeloid lineage, endothelial cells, and platelets. J Immunol. 1998; 160(4):1929-1935.(Biology)
Tenner AJ. C1q receptors: regulating specific functions of phagocytic cells. Immunobiology. 1998; 199(2):250-264.(Biology)