Product Information

Material Number: 564934
Alternate Name: C1QR1; C1qR(P); C1q/MBL/SPA Receptor; MXRA4; GR11; Dj737e23.1
Size: 50 µg
Concentration: 0.2 mg/ml
Clone: R139
Immunogen: Clq-CLF-binding proteins
Isotype: Mouse IgG2b, κ
Reactivity: QC Testing: Human
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The R139 monoclonal antibody specifically binds to CD93 which is also known as Complement component C1q receptor (C1qR), C1q receptor 1 (C1qR1), or Matrix-remodeling-associated protein 4 (MXRA4). The immunogen used to generate the R139 hybridoma was a preparation of CD93 protein. Human CD93 is a transmembrane glycoprotein that is highly expressed on monocytes, macrophages, granulocytes, and endothelial cells but not on T and B lymphocytes. CD93 is also known as the C1q/MBL/SPA Receptor as it 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. R139 is suitable to detect CD93 expression on cells of myeloid lineage by flow cytometry, and CD93 in cellular lysates by Western blotting or immunoprecipitation. In addition, R139 reportedly neutralizes C1q-mediated enhancement of phagocytosis. CD93 has also been reported to define a human stem cell population with hematopoietic and hepatic potential.

The antibody was conjugated to BD Horizon BUV737 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome of BD Horizon BUV395 with an Ex Max of 348-nm and an acceptor dye with an Em Max at 737-nm. BD Horizon Brilliant BUV737 can be excited by the ultraviolet laser (355 nm) and detected with a 740/35 filter. Due to the excitation of the acceptor dye by other laser lines, there may be significant spillover into channels detecting Alexa Fluor® 700-like dyes (eg, 712/20-nm filter).

Due to spectral differences between labeled cells and beads, using BD™ CompBeads can result in incorrect spillover values when used with BD Horizon BUV37 reagents. Therefore, the use of BD CompBeads or BD CompBeads Plus to determine spillover values for these reagents is not recommended. Different BUV737 reagents (e.g., CD4 vs. CD45) can have slightly different fluorescence spillover therefore, it may also be necessary to use clone specific compensation controls when using these reagents.

Two-parameter flow cytometric analysis of CD93 expression on human peripheral blood leucocytes. Human whole blood was stained with either BD Horizon™ BUV737 Mouse IgG2b, κ Isotype Control (Cat. No. 564429; Left Panel) or BD Horizon BUV737 Mouse Anti-Human CD93 antibody (Cat. No. 564934; Right Panel). Erythrocytes were lysed with BD FACS Lysing Solution (Cat. No. 349202). Two-parameter flow cytometric contour plots showing the correlated expression of CD93 (or Ig Isotype control staining) versus side light-scatter signals (SSC-A) were derived from gated events with the forward and side light scatter characteristics of intact leucocyte populations. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.
**Preparation and Storage**

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze. The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated with BD Horizon™ BUV737 under optimum conditions, and unconjugated antibody and free BD Horizon BUV737 were removed.

**Application Notes**

**Application**

| Flow cytometry | Routinely Tested |

**Suggested Companion Products**

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
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<td>Stain Buffer (FBS)</td>
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**Product Notices**

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

**References**


Nepomuceno RR, Henschen-Edman AH, Burgess WH, Tenner AJ. cDNA cloning and primary structure analysis of C1qR(P), the human C1q/MBL/SPA receptor that mediates enhanced phagocytosis in vitro. *Immunology.* 1997; 6(2):119-129. (Biology)


Nepomuceno RR, Tenner AJ. C1qR, 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)