**Product Information**

- **Material Number:** 565948
- **Alternate Name:** SLC3A2; CD98HC; 4F2; 4F2hc; MDU1; NACAE; 4T2HC
- **Size:** 25 Tests
- **Vol. per Test:** 5 µl
- **Clone:** UM7F8
- **Immunogen:** Human T-leukemic and Thymic Cell Lines
- **Isotype:** Mouse (BALB/c) IgG1, κ
- **Reactivity:** QC Testing: Human
- **Workshop:** V T020; BP420
- **Storage Buffer:** Aqueous buffered solution containing ≤0.09% sodium azide.

**Description**

CD98 is a disulfide-linked heterodimer composed of a ~80-85 kDa, type II membrane glycoprotein heavy chain, (CD98hc), and ~40-45 kDa light chain. The UM7F8 monoclonal antibody specifically recognizes CD98hc, which is also known as 4F2 heavy chain antigen (4F2hc).

CD98 is broadly expressed on hematopoietic cells, including peripheral blood lymphocytes, monocytes and granulocytes (low), as well as non-hematopoietic cells, eg, intestinal epithelial cells. CD98 expression is upregulated on activated and proliferating cells. CD98hc is encoded by the SLC3A2 [solute carrier family 3 (amino acid transporter heavy chain), member 2] gene. CD98 reportedly functions in transmembrane amino acid transport and in the regulation of integrin signaling which are involved in the regulation of cellular activation, proliferation, and survival. The UM7F8 antibody is reportedly a functional antibody that can costimulate T cell proliferative responses.

The antibody was conjugated to BD Horizon BB515 which was developed exclusively by BD Biosciences. With an excitation max of 490 nm and an emission max of 515 nm, BD Horizon BB515 can be excited by the 488 nm laser and detected in a standard FITC set (eg, 530/30-nm filter). This dye provides a much brighter alternative to FITC with less spillover into the PE detector.
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™ BB515 under optimum conditions and unconjugated antibody was removed.

Application Notes

Application

| Flow cytometry | Routinely Tested |

Recommended Assay Procedure:
For optimal results, it is recommended to perform 2 washes after staining with antibodies. Cells may be prepared, stained with antibodies and washed twice with wash buffer per established protocols for immunofluorescent staining, prior to acquisition on a flow cytometer. Performing fewer than the recommended wash steps may lead to increased spread of the negative population.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).

Suggested Companion Products

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tr>
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<td>Stain Buffer (FBS)</td>
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<td>(none)</td>
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<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<tr>
<td>563794</td>
<td>Brilliant Stain Buffer</td>
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<td>565103</td>
<td>BB515 Mouse Anti-Human CD98</td>
<td>50 Tests</td>
<td>UM7F8</td>
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<td>564416</td>
<td>BB515 Mouse IgG1, κ Isotype Control</td>
<td>100 µg</td>
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<td>349202</td>
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<td>Lysing Buffer</td>
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<tr>
<td>556076</td>
<td>FITC Mouse Anti-Human CD98</td>
<td>100 Tests</td>
<td>UM7F8</td>
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Product Notices
1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
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.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. The manufacture, use, sale, offer for sale, or import of this product is subject to one or more patents or pending applications. This product, and only in the amount purchased by buyer, may be used solely for buyer’s own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. Diagnostic uses require a separate license.
6. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.

References


Kishimoto T. Tadamitsu Kishimoto .. et al., ed. Leucocyte typing VI : white cell differentiation antigens : proceedings of the sixth international workshop and conference held in Kobe, Japan, 10-14 November 1996. New York: Garland Pub.; 1997(Biology)
