

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD98 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2A} Clone # 590559
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human CD98 Asp105-Gln529 Accession # P08195
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Flow Cytometry	2.5 µg/10 ⁶ cells	See Below
Immunocytochemistry	8-25 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

<p>Flow Cytometry</p> <p>Detection of CD98 in K562 Human Cell Line by Flow Cytometry. K562 human chronic myelogenous leukemia cell line was stained with Mouse Anti-Human CD98 Monoclonal Antibody (Catalog # MAB5920, filled histogram) or isotype control antibody (Catalog # MAB003, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG F(ab')₂ Secondary Antibody (Catalog # F0102B).</p>	<p>Immunocytochemistry</p> <p>CD98 in K562 Human Cell Line. CD98 was detected in immersion fixed K562 human chronic myelogenous leukemia cell line using Mouse Anti-Human CD98 Monoclonal Antibody (Catalog # MAB5920) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CD98, also known as 4F2, is a widely expressed disulfide-linked heterodimer in the solute transporter family. It consists of an 85 kDa glycosylated type II transmembrane heavy chain and a 40-50 kDa non-glycosylated light chain with 12 transmembrane segments. The heavy chain (SLC3A2) pairs with one of several light chains (SLC7A5, 6, 7, 8, 10, or 11) and is required for the cell surface expression and amino acid transport function of the light chains. CD98 also mediates integrin signaling, T cell costimulation, B cell proliferation, and viral fusion with cell membranes. Within the extracellular region, human CD98 heavy chain shares 73% and 71% aa sequence identity with mouse and rat CD98 heavy chain, respectively.