

## Product datasheet

# Anti-CD98 antibody [44D7] - Plasma Membrane Marker ab23495

★★★★★ [2 Abreviews](#) [5 References](#) [1 Image](#)

### Overview

|                            |   |
|----------------------------|---|
| <b>Product name</b>        | Anti-CD98 antibody [44D7] - Plasma Membrane Marker  |
| <b>Description</b>         | Mouse monoclonal [44D7] to CD98 - Plasma Membrane Marker  |
| <b>Host species</b>        | Mouse   |
| <b>Specificity</b>         | The antibody reacts with the heavy chain of the CD98 molecule. It binds to all cell lines in culture and to activated T cells.  |
| <b>Tested applications</b> | <b>Suitable for:</b> Flow Cyt   |
| <b>Species reactivity</b>  | <b>Reacts with:</b> Human   |
| <b>Immunogen</b>           | Tissue, cells or virus corresponding to Human CD98. HOON pre B leukaemia cell line.   |
| <b>General notes</b>       | <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p> |

### Properties

|                             |  |
|-----------------------------|--|
| <b>Form</b>                 | Liquid   |
| <b>Storage instructions</b> | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. |
| <b>Storage buffer</b>       | Preservative: 0.09% Sodium azide   |
| <b>Purity</b>               | Protein G purified   |
| <b>Purification notes</b>   | The antibody was purified by affinity chromatography.  |
| <b>Clonality</b>            | Monoclonal   |
| <b>Clone number</b>         | 44D7   |
| <b>Myeloma</b>              | Sp2/0-Ag14   |
| <b>Isotype</b>              | IgG1   |

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab23495 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes   |
|-------------|-----------|---|
| Flow Cyt    |           | Use 10µl for 10 <sup>6</sup> cells.<br>Use 10µl of working dilution for 10 <sup>6</sup> cells in 100µl.<br><b>ab170190</b> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |

## Target

### Function

Required for the function of light chain amino-acid transporters. Involved in sodium-independent, high-affinity transport of large neutral amino acids such as phenylalanine, tyrosine, leucine, arginine and tryptophan. Involved in guiding and targeting of LAT1 and LAT2 to the plasma membrane. When associated with SLC7A6 or SLC7A7 acts as an arginine/glutamine exchanger, following an antiport mechanism for amino acid transport, influencing arginine release in exchange for extracellular amino acids. Plays a role in nitric oxide synthesis in human umbilical vein endothelial cells (HUVECs) via transport of L-arginine. Required for normal and neoplastic cell growth. When associated with SLC7A5/LAT1, is also involved in the transport of L-DOPA across the blood-brain barrier, and that of thyroid hormones triiodothyronine (T3) and thyroxine (T4) across the cell membrane in tissues such as placenta. Involved in the uptake of methylmercury (MeHg) when administered as the L-cysteine or D,L-homocysteine complexes, and hence plays a role in metal ion homeostasis and toxicity. When associated with SLC7A5 or SLC7A8, involved in the cellular activity of small molecular weight nitrosothiols, via the stereoselective transport of L-nitrosocysteine (L-CNSO) across the transmembrane. Together with ICAM1, regulates the transport activity LAT2 in polarized intestinal cells, by generating and delivering intracellular signals. When associated with SLC7A5, plays an important role in transporting L-leucine from the circulating blood to the retina across the inner blood-retinal barrier.

### Tissue specificity

Expressed ubiquitously in all tissues tested with highest levels detected in kidney, placenta and testis and weakest level in thymus. During gestation, expression in the placenta was significantly stronger at full-term than at the mid-trimester stage. Expressed in HUVECS and at low levels in resting peripheral blood T-lymphocytes and quiescent fibroblasts. Also expressed in fetal liver and in the astrocytic process of primary astrocytic gliomas. Expressed in retinal endothelial cells and in the intestinal epithelial cell line C2BBel.

### Sequence similarities

Belongs to the SLC3A transporter family.

### Post-translational modifications

Phosphorylation on Ser-406; Ser-408 or Ser-410 and on Ser-527 or Ser-531 by ecto-protein kinases favors heterotypic cell-cell interactions.

### Cellular localization

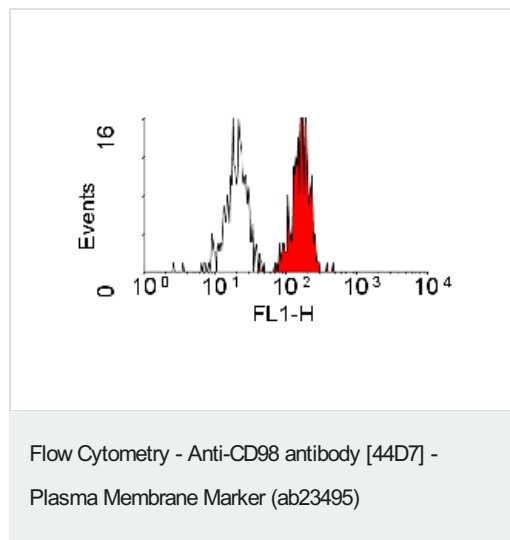
Apical cell membrane. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV. Localized to the plasma membrane when associated with SLC7A5 or SLC7A8. Localized to the placental apical membrane. Located selectively at cell-cell adhesion sites (By similarity). Colocalized with SLC7A8/LAT2 at the basolateral membrane of kidney proximal tubules and small intestine epithelia. Expressed in both luminal and abluminal membranes of brain capillary endothelial cells (By similarity).

### Form

There are 4 isoforms produced by alternative splicing.

## Images

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ab23495 staining CD98 in Human peripheral blood monocytes, detected with FITC-conjugated Rabbit anti-Mouse IgG as the secondary antibody.

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