Product name: Anti-Transferrin Receptor antibody [MEM-189] ab1086

Description: Mouse monoclonal [MEM-189] to Transferrin Receptor

Host species: Mouse

Specificity: The antibody MEM-189 reacts with CD71 antigen (transferrin receptor), a 95 kDa type II homodimeric transmembrane glycoprotein expressed on activated B and lymphocytes, macrophages and erythroid precursors; it is lost on resting blood leukocytes. The antibody MEM-189 does not block binding of transferrin to the receptor.

Tested applications:
- Suitable for: IHC-FrFl, Flow Cyt, IP, WB
- Unsuitable for: ICC/IF

Species reactivity: Reacts with: Mouse, Rat, Human

Immunogen: Tissue, cells or virus corresponding to Human Transferrin Receptor.

Form: Liquid

Storage instructions: 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.

Storage buffer:
- pH: 7.40
- Preservative: 0.097% Sodium azide
- Constituent: PBS

Purity: Tissue culture supernatant

Clonality: Monoclonal

Clone number: MEM-189

Isotype: IgG1

Applications:

Our Abpromise guarantee covers the use of ab1086 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
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<tbody>
<tr>
<td>IHC-FrFl</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>Flow Cyt</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use a concentration of 2 µg/ml. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>IP</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. Use under non reducing condition.</td>
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**Application notes**

Is unsuitable for ICC/IF.

**Function**

Cellular uptake of iron occurs via receptor-mediated endocytosis of ligand-occupied transferrin receptor into specialized endosomes. Endosomal acidification leads to iron release. The apotransferrin-receptor complex is then recycled to the cell surface with a return to neutral pH and the concomitant loss of affinity of apotransferrin for its receptor. Transferrin receptor is necessary for development of erythrocytes and the nervous system (By similarity). A second ligand, the hereditary hemochromatosis protein HFE, competes for binding with transferrin for an overlapping C-terminal binding site. Positively regulates T and B cell proliferation through iron uptake (PubMed:26642240).

(Microbial infection) Acts as a receptor for new-world arenaviruses: Guanarito, Junin and Machupo virus.

**Involvement in disease**

Immunodeficiency 46

**Sequence similarities**

Belongs to the peptidase M28 family. M28B subfamily. Contains 1 PA (protease associated) domain.

**Post-translational modifications**

N- and O-glycosylated, phosphorylated and palmitoylated. The serum form is only glycosylated. Proteolytically cleaved on Arg-100 to produce the soluble serum form (sTfR). Palmitoylated on both Cys-62 and Cys-67. Cys-62 seems to be the major site of palmitoylation.

**Cellular localization**

Secreted and Cell membrane. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

**Images**
ab1086 staining Transferrin Receptor in Human PC-3 prostate cancer cell line by Flow Cytometry. The sample was incubated with the primary antibody (0.3µg/ml in PBS + 2% FBS) for 1 hour at 4°C. An Alexa Fluor® 488-conjugated Goat anti-mouse IgG (1/500) was used as the secondary antibody.

Gating Strategy: Cells gated for live and singlets.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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