Product datasheet

Anti-Transferrin Receptor antibody [MEM-189] ab1086

Overview

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

Properties

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.
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.

Application notes
Is unsuitable for ICC/IF.
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.

Flow Cytometry - Anti-Transferrin Receptor antibody

[MEM-189] (ab1086)
This image is courtesy of an anonymous Abreview

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