

Anti-Transferrin Receptor antibody [OX26] ab6331

3 Images

Overview

Product name	Anti-Transferrin Receptor antibody [OX26]
Description	Mouse monoclonal [OX26] to Transferrin Receptor
Host species	Mouse
Tested applications	Suitable for: Flow Cyt, IHC-P
Species reactivity	Reacts with: Mouse, Rat
Immunogen	Tissue, cells or virus. This information is proprietary to Abcam and/or its suppliers.
Positive control	Flow Cyt: Lewis rat bone marrow cells. IHC-P: Mouse and rat placenta tissue.
General notes	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <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&As</p>

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 long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium azide Constituent: PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	OX26
Isotype	IgG2a
Light chain type	kappa

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab6331 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 a concentration of 0.2 µg/ml.
IHC-P		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Target

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.

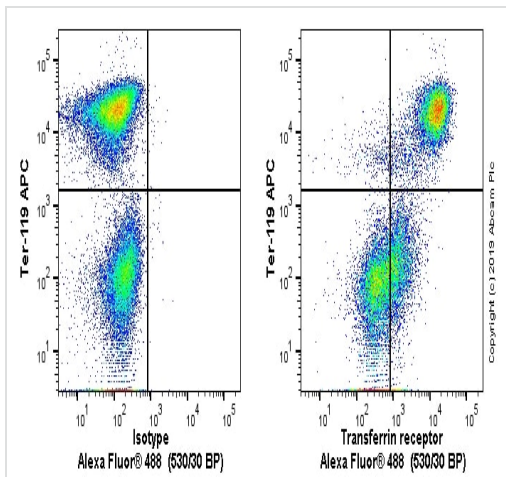
Post-translational modifications

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



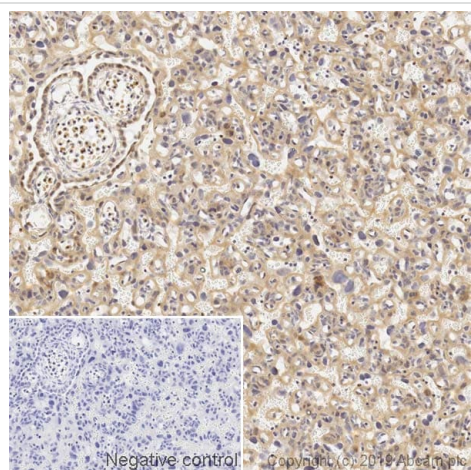
Flow Cytometry - Anti-Transferrin Receptor antibody [OX26] (ab6331)

Lewis rat bone marrow cells stained with ab6331 (right) or mouse IgG2a kappa (**ab170191**) isotype (left). Cells were incubated for 30 min on ice in 1x PBS containing 10 % rat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody (ab6331) or mouse IgG2a kappa (**ab170191**) isotype (1×10^6 in 100 μ l at 0.2 μ g/ml) for 30 min on ice.

The secondary antibody Goat anti-mouse IgG H&L (Alexa Fluor $\text{\textcircled{R}}$ 488, pre-adsorbed) (**ab150117**) was used at 1/2000 dilution for 30 min on ice.

The cells were simultaneously stained with Ter-119.

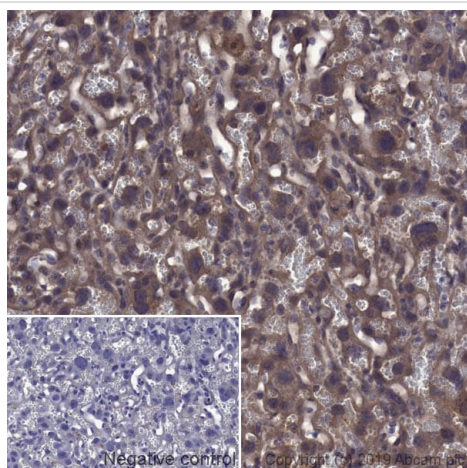
Acquisition of >30,000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter. Events were gated on live single cells.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Transferrin Receptor antibody [OX26] (ab6331)

IHC image of Transferrin receptor staining in a section of formalin-fixed paraffin-embedded normal rat placenta performed on a Leica BOND™ system using the standard Protocol F, omitting the post-primary step. The section was pre-treated using heat mediated antigen retrieval with EDTA buffer (pH9, epitope retrieval solution 2) for 20mins. The section was then incubated with ab6331, 5 μ g/ml, for 15 mins at room temperature. The section was then incubated with **ab98792** (Rabbit polyclonal Secondary Antibody to Mouse IgG - H&L, pre-adsorbed) 1/500 for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with hematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



IHC image of Transferrin receptor staining in normal mouse placenta formalin fixed paraffin embedded tissue section, using Mouse on Mouse detection kit **ab127055**. The section was pre-treated using pressure cooker heat mediated antigen retrieval with sodium citrate buffer (pH6) for 30mins. The section was incubated with ab6331, 5µg/ml overnight at +4°C. The section was counterstained with hematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Transferrin Receptor antibody [OX26] (ab6331)

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