abcam

Product datasheet

Anti-CD45RC antibody [MRC OX-22] ab33945

★★★★★ 1 Abreviews 3 References 3 Images

Overview

Product name	Anti-CD45RC antibody [MRC OX-22]
Description	Mouse monoclonal [MRC OX-22] to CD45RC
Host species	Mouse
Tested applications	**Suitable for:** IHC-Fr, IHC-P, Flow Cyt
Species reactivity	**Reacts with:** Rat, Human
Immunogen	Tissue, cells or virus corresponding to Rat CD45RC. PHA stimulated rat lymphocytes.
Positive control	IHC-Fr: Frozen rat spleen. IHC-P: Rat spleen tissue.
General notes	This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. 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. 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

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	MRC OX-22
Myeloma	NS1
Isotype	IgG1

Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab33945 in the following tested applications.

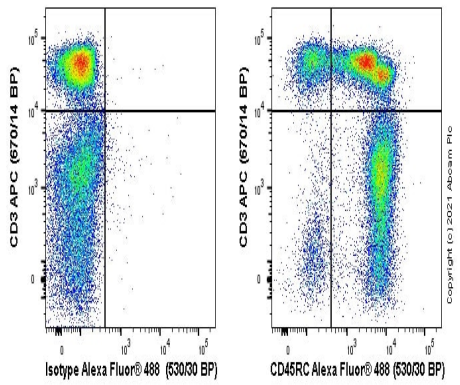
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr		Use a concentration of 1 mg/ml. This product gave a positive signal in HeLa cells fixed with 10% formaldehyde (10 min).
IHC-P	★★★★★ (1)	Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
Flow Cyt		Use at an assay dependent concentration.

Target

Function	Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor. Acts as a positive regulator of T-cell coactivation upon binding to DPP4. The first PTPase domain has enzymatic activity, while the second one seems to affect the substrate specificity of the first one. Upon T-cell activation, recruits and dephosphorylates SKAP1 and FYN. Dephosphorylates LYN, and thereby modulates LYN activity.
Involvement in disease	Severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-positive/NK-cell-positive Multiple sclerosis
Sequence similarities	Belongs to the protein-tyrosine phosphatase family. Receptor class 1/6 subfamily. Contains 2 fibronectin type-III domains. Contains 2 tyrosine-protein phosphatase domains.
Domain	The first PTPase domain interacts with SKAP1.
Post-translational modifications	Heavily N- and O-glycosylated.
Cellular localization	Membrane. Membrane raft. Colocalized with DPP4 in membrane rafts.

Images



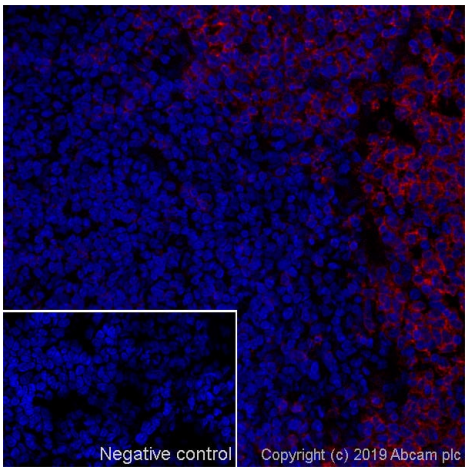
Flow Cytometry - Anti-CD45RC antibody [MRC OX-22] (ab33945)

Flow cytometry staining of Lewis rat splenocytes with ab33945 (right) or mouse IgG1&kappa (**ab170190**) 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 (ab33945) or mouse IgG1&kappa (**ab170190**) isotype ($1x10^6$ in 100 µl; at 0.2 µg/ml) for 30 min on ice.

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

The cells were simultaneously stained with CD3 APC.

Acquisition of >30000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter. Events were gated on live single cells.



Immunohistochemistry (Frozen sections) - Anti-CD45RC antibody [MRC OX-22] (ab33945)

IHC image of CD45RC staining in a section of frozen normal rat spleen*.

The section was fixed using 10% formaldehyde in 1XPBS for 10 minutes. No antigen retrieval step was performed prior to staining.

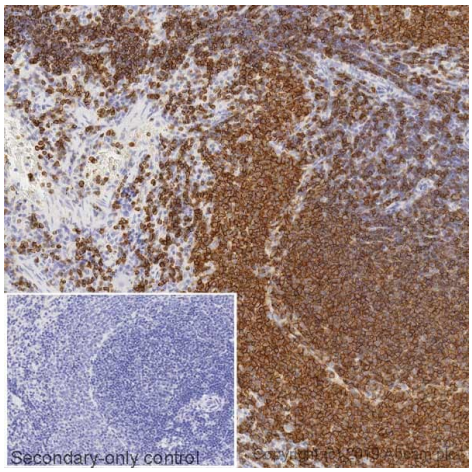
Non-specific protein-protein interactions were blocked using TBS containing 0.025% (v/v) Triton X-100, 0.3M (w/v) glycine and 3% (w/v) BSA for 1 hour at room temperature. The section was then incubated with ab33945 (1µg/ml dilution) in TBS containing 0.025% (v/v) Triton X-100 and 3% (w/v) BSA overnight at +4°C. The section was then incubated with **ab150119** ((Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 647) (shown in red) and DAPI (staining nuclear DNA) (shown in blue) for 1 hour at room temperature. The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

The DAPI only control (no antibody) inset shows no autofluorescence, demonstrating that any Alexa Fluor® 647 signal is derived directly from bound ab33945.

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

*Tissue obtained from Charles River.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD45RC antibody [MRC OX-22] (ab33945)

IHC image of CD45RC staining in a section of formalin-fixed paraffin-embedded normal rat spleen performed on a Leica BOND™ system using the standard Protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab33945, 1µg/ml, 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

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