

Product datasheet

Anti-CD45RC antibody [MRC OX-22] ab33945

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Overview

Product name	Anti-CD45RC antibody [MRC OX-22]
Description	Mouse monoclonal [MRC OX-22] to CD45RC
Host species	Mouse
Specificity	ab33945 recognises rat CD45RC, the high molecular weight form of the leucocyte common antigen. The antigen is found on B cells, approximately 50% of bone marrow cells, all CD8+ve T cells, but splits CD4+ve T cells into two populations, CD4+CD45RChigh (Th1-like) and CD4+CD45RClow (Th2-like).
Tested applications	Suitable for: IHC-Fr, IHC-P, Flow Cyt
Species reactivity	Reacts with: Rat
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 .

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	Immunogen affinity purified
Clonality	Monoclonal
Clone number	MRC OX-22
Myeloma	NS1
Isotype	IgG1
Light chain type	kappa

Applications

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	★★★★★	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

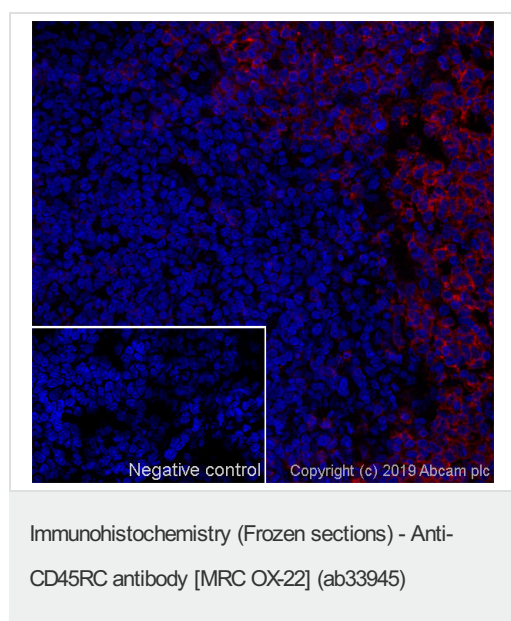
Relevance

The CD45 family of cell surface glycoprotein antigens exist as a set of isoforms. The patterns of monoclonal antibody recognition of the CD45 phenotypes can be restricted (CD45RA, RB and RC), or broader, such as the CD45 T 200 species. The "restricted" subsets of this group arise as a result of translation of alternatively spliced mRNAs from exons A, B and C (exons 4, 5 and 6), where exons 3-15 encode the extracellular domain of the CD45 molecule. The restricted epitopes are differentially expressed on T and B lymphocytes, including functionally distinct T cells. CD45 (LCA) is a transmembrane phosphotyrosine phosphatase expressed on leucocytes. Myeloid cells do not express the RC isoform.

Cellular localization

Membrane; Single-pass type I membrane protein. Membrane raft. Note: Colocalized with DPP4 in membrane rafts.

Images



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 (1 µg/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®.

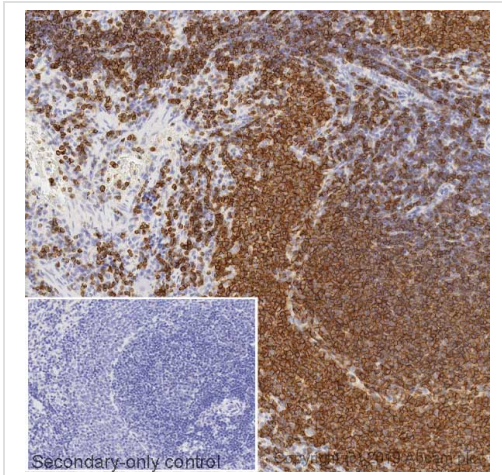
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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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