abcam

Product datasheet

Anti-CD45RA antibody [MRC OX-33] ab33933

2 References 2 Images

Overview

Product name	Anti-CD45RA antibody [MRC OX-33]
Description	Mouse monoclonal [MRC OX-33] to CD45RA
Host species	Mouse
Tested applications	**Suitable for:** IHC-Fr, Flow Cyt
Species reactivity	**Reacts with:** Rat
Immunogen	Full length native protein (purified) corresponding to Rat CD45RA. Purified spleen leucocyte common antigen.
Positive control	Flow Cyt: Lewis rat splenocytes. IHC-Fr: Rat Spleen
General notes	

Spleen cells from immunised BALB/c mice were fused with cells of the NSO/U myeloma cell line. This clone has been described reacting with paraffin embedded material following PLP fixation (see Whiteland et al., 1995). It only labels B cells among thoracic duct lymphocytes, with little labelling in bone marrow and none on thymocytes (Barclay et al., 1987).

This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

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, as well as 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	pH: 7.20 Preservative: 0.02% Sodium azide Constituent: PBS
Purity	Immunogen affinity purified
Purification notes	This antibody was purified from tissue culture supernatant.
Primary antibody notes	Spleen cells from immunised BALB/c mice were fused with cells of the NSO/U myeloma cell line. This clone has been described reacting with paraffin embedded material following PLP fixation (see Whiteland et al., 1995). It only labels B cells among thoracic duct lymphocytes, with little labelling in bone marrow and none on thymocytes (Barclay et al., 1987).
Clonality	Monoclonal
Clone number	MRC OX-33
Isotype	IgG1
Light chain type	kappa

Applications

Our Abpromise guarantee covers the use of **ab33933** in the following tested applications.

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

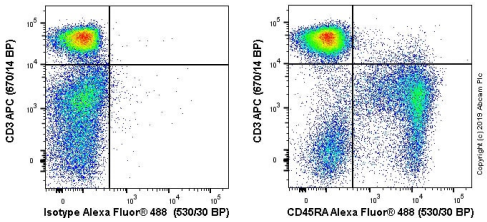
Application	Abreviews	Notes
IHC-Fr		Use a concentration of 1 µg/ml.
Flow Cyt		Use a concentration of 0.2 µg/ml. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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

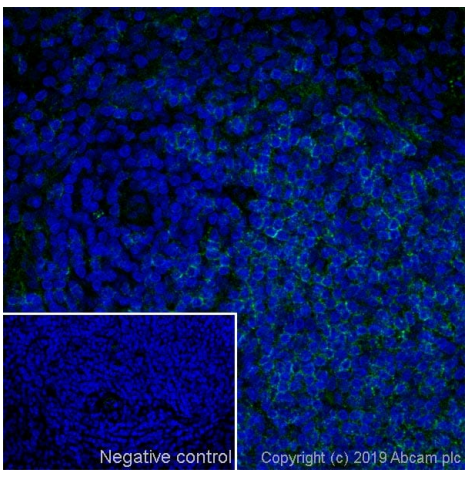


Flow Cytometry - Anti-CD45RA antibody [MRC OX-33] (ab33933)

Lewis rat splenocytes stained with ab33933 (right) or mouse IgG1κ (ab170190) isotype (left). Lewis rat splenocytes were incubated for 30 min on ice in 1x PBS / 10 % rat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody (ab33933) or mouse IgG1κ isotype (ab170190) ($1x10^6$ in 100µl at 0.2 µg/ml) for 30 min on ice.

The secondary antibody Goat anti-mouse IgG H&L (Alexa Fluor ® 488, pre-adsorbed) (ab150177) was used at 1/2000 dilution for 30 min at 4°C. The cells were simultaneously stained with CD3 antibody.

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



Immunohistochemistry (Frozen sections) - Anti-CD45RA antibody [MRC OX-33] (ab33933)

IHC image of CD45RA 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 then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab33933 at 1µg/ml. The section was then incubated with ab150117 (Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) preabsorbed, (Shown in green) 1/1000) for 1 hour at room temperature. DAPI was used to stain the cell nuclei (blue). The secondary-only control insert image is taken from an identical assay without primary antibody. The section was then mounted using Fluoromount®.

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

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

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