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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, Human
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**. 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	pH: 7.20 Preservative: 0.02% Sodium azide Constituent: PBS
Purity	Protein G 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

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

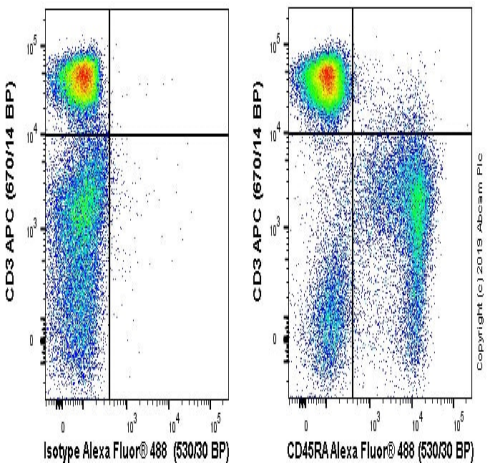
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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

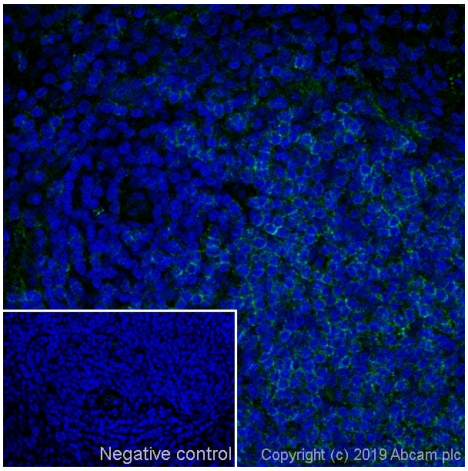


Flow Cytometry - Anti-CD45RA antibody [MRC OX-33] (ab33933)

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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