

DESCRIPTION

Species Reactivity	Human
Specificity	Detects CD45RA in direct ELISA.
Source	Monoclonal Mouse IgG _{2A} Clone # 1069433
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Whole cells (naïve T cells) Accession # P08575
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

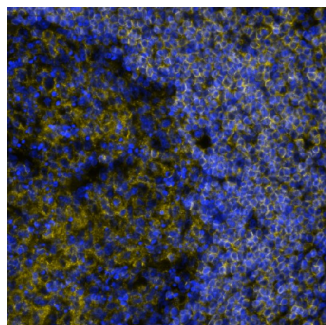
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10 ⁶ cells	PBMC lymphocytes
Multiplex Immunofluorescence	2.5 µg/mL	Immersion fixed paraffin embedded sections of human appendix
Immunohistochemistry	5-25 µg/mL	Immersion fixed paraffin-embedded sections of Human Tonsil

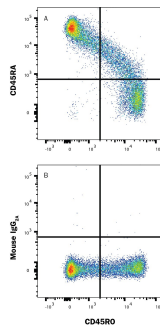
DATA

Multiplex Immunofluorescence



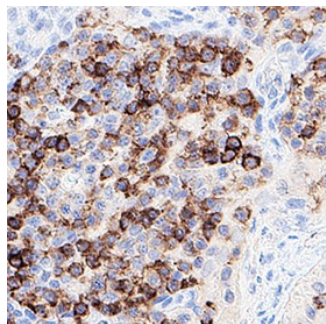
Detection of CD45RA in Human Appendix I via Multiplex Immunofluorescence staining on COMET™ CD45RA was detected in immersion fixed paraffin-embedded sections of human appendix using Mouse Anti-Human CD45RA Monoclonal Antibody (Catalog # [MAB11444](#)) at 2.5µg/mL at 37 ° Celsius for 4 minutes. Before incubation with the primary antibody, tissue underwent an all-in-one dewaxing and antigen retrieval preprocessing using PreTreatment Module (PT Module) and Dewax and HIER Buffer H (pH 9). Tissue was stained using the Alexa Fluor™ 555 Goat anti-Mouse IgG Secondary Antibody at 1:100 at 37 ° Celsius for 2 minutes. (Yellow; Lunaphore Catalog # [DR555MS](#)) and counterstained with DAPI (blue; Lunaphore Catalog # [DR100](#)). Specific staining was localized to the membrane. Protocol available in [COMET™ Panel Builder](#).

Flow Cytometry



Detection of CD45RA in PBMC lymphocytes by Flow Cytometry. PBMC lymphocytes were stained with either (A) Mouse Anti-Human CD45RA Monoclonal Antibody (Catalog # [MAB11444](#)) or (B) Mouse IgG2a Isotype Control (Catalog # [MAB003](#)) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # [F0101B](#)) and followed with Mouse Anti-Human CD45RO Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # [FAB10642G](#)). View our protocol for [Staining Membrane-associated Proteins](#).

Immunohistochemistry



Detection of CD45RA in Human Tonsil. CD45RA was detected in immersion fixed paraffin-embedded sections of Human Tonsil using Mouse Anti-Human CD45RA Monoclonal Antibody (Catalog # [MAB11444](#)) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # [VC001](#)). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # [VCTS021](#)). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cell surface in lymphocytes. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

This monoclonal antibody specifically binds to the 220 kDa isoform of human CD45, CD45RA. CD45RA is a single chain type I glycoprotein that is encoded by the human PTPRC gene. In humans, CD45RA is one of six isoforms of the CD45 complex. These different isoforms are the result of alternative splicing and some of the other isoforms include CD45RO, CD45RB, and CD45RC. CD45RO, CD45RB, CD45RC, and CD45RA are primarily expressed on T cells. CD45RA contains exon 4 but lacks both exons 5 and 6. CD45RO contains exons 3, 7, and 8 but not RA, RB, and RC exons. Phenotypically, CD45RA is highly expressed on naïve T cells whereas CD45RO is expressed on activated and memory T cells. Other cell types such as activated monocytes and B cells can also express CD45RO. Both CD45RA and CD45RO are used to characterize different subsets of Memory T cells.