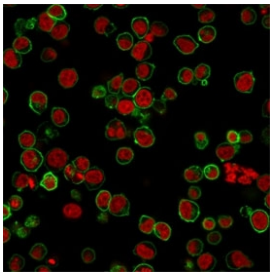
CD45 Antibody [clone 135-4C5] (V2399)

Catalog No.	Formulation	Size
V2399-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2399-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2399SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2399IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

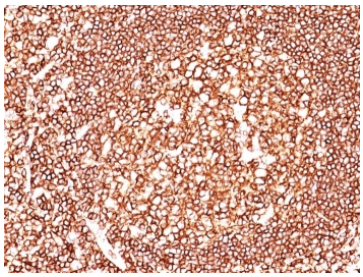
Citations (7)

Bulk quote request

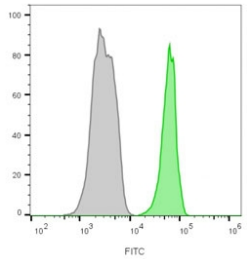
Species Reactivity	Human
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	135-4C5
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
UniProt	P08575
Localization	Cell surface and cytoplasmic
Applications	Flow Cytometry : 1-2ug/10^6 cells Immunofluorescence : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This CD45 antibody is available for research use only.



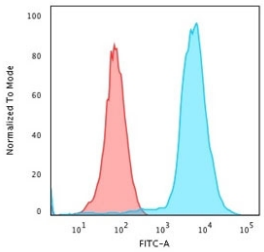
Immunofluorescent staining of PFA-fixed human Jurkat cells with CD45 antibody (clone 135-4C5, green) and Reddot nuclear stain (red).



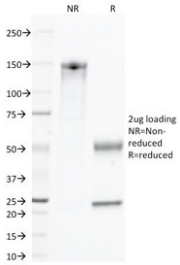
IHC staining of FFPE human tonsil tissue with CD45 antibody (clone 135-4C5).



Flow cytometry testing of lymphocyte-gated human PBM cells with CD45 antibody (clone 135-4C5, green), and unstained cells (gray).



Flow cytometry staining of PFA-fixed human Jukat cells with CD45 antibody (clone 135-4C5); Red=isotype control, Blue= CD45 antibody.



SDS-PAGE Analysis of Purified, BSA-Free CD45 Antibody (clone 135-4C5). Confirmation of Integrity and Purity of the Antibody.

Description

CD45, also referred to as CD45R and PTPRC (Protein tyrosine phosphatase receptor type C), has been identified as a transmembrane glycoprotein, broadly expressed among hematopoietic cells. Along with other members of the PTP family, it regulates a number of cellular processes including cell differentiation, growth and mitotic cycle, and is an essential regulator of B- and T-cell antigen receptor-mediated activation.

Multiple isoforms of CD45 are distributed throughout the immune system and arise due to alternative splicing of exons located in the N-terminus. CD45RA contains the A exon and is a naive T-cell marker which may help prevent autoimmune disease. CD45RB contains B and stains most leukemias and lymphomas. CD45RC contains C and stains thymocytes, monocytes and dendritic cells. CD45RO doesn't contain A, B or C and is a marker of activated T-cells that can be used to classify and diagnose and classify lymphomas. This antibody will bind to all CD45 isoforms. The variation in these isoforms is localized to the extracellular domain, with the intracellular domain being conserved. Antibody to CD45 is useful in differential diagnosis of lymphoid tumors from non-hematopoietic undifferentiated neoplasms.

Application Notes

Due to variation in protocol and secondary antibody used, the CD45 antibody may need to be titered for optimal performance.

1. FFPE staining requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Stimulated human leukocytes were used as the immunogen for the CD45 antibody.

Storage

CD45 antibody (with azide) can be stored at 2-8oC. The azide-free format should be aliquoted and stored at -20oC or colder.

References (2)