

PRODUCT INFORMATION SHEET
Monoclonal antibodies detecting human antigens

CD45 FITC **CD34** R-PE RUO REF IQP-280FR 50 tests

RUO **For Research Use Only**



Description

CD45 (ML2) reacts with the CD45 antigen, also known as the leukocyte common antigen (LCA) or T200 antigen, comprised of different glycoproteins ranging from 180-240 kD. Expression of CD45 is found on all haematopoietic cells, e.g. granulocytes, monocytes, macrophages and lymphocytes, except mature erythroid cells. In humans, there is heterogeneous expression of CD45 isoforms (RA, RB, RO, RC) on lymphocyte subpopulations, such as T cells or B cells.

CD34 (581) reacts with the human CD34 antigen. The CD34 antigen is a heavily glycosylated membrane protein of unknown function with no homology to any other known proteins. CD34 is expressed on haematopoietic progenitor cells, vascular endothelium, and some tissue fibroblasts.

CD45

Clone ML2

Isotype Murine IgG1

Specificity CD45 is a family of transmembrane protein tyrosine phosphatases critically involved in the regulation of lymphocyte activation signals. Detection of distinct isoforms can distinguish between naive T cells and memory T cells.

HLDA Workshop

6th Leukocyte Typing Workshop - Kishimoto T., et al., Eds. Garland Pub. Inc. (1989)

CD34

Clone 581

Isotype Murine IgG1

Specificity CD34 antibodies are important in experimental studies on human haematopoietic progenitors, candidate stem cells, and leukemic cell populations. It appears that the glycosylation of CD34 differs between HEV, vascular endothelium or haematopoietic cell lines, suggesting the existence of HEV-specific glycoforms of CD34 that could function as HEV ligands of lymphocyte L-selectin in humans. This suggests that, in addition to its role in haematopoiesis, CD34 could also play a role in lymphocyte recirculation.

HLDA Workshop

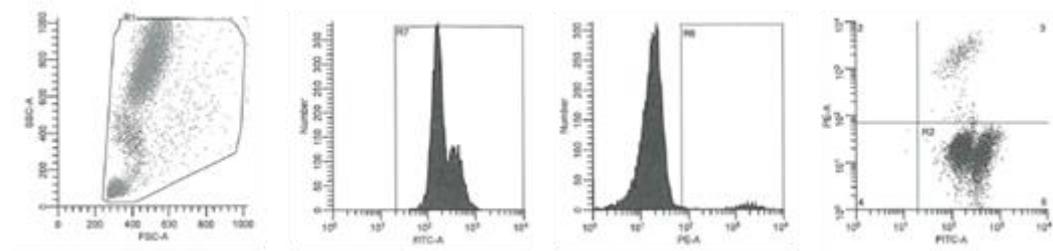
5th Leukocyte Typing Workshop - Gaudernack, G., Egeland, T. (1995)

Usage

All these reagents are effectively formulated for direct immunofluorescent staining of human tissue for flow cytometric analysis using 10 µL/10⁶ leukocytes for singles and 20 µL/10⁶ leukocytes in case of dual and triple combinations. Since applications vary, each investigator should titrate the reagent to obtain optimal results.

Representative Data

IQP-280FR (CD45/CD34) was analyzed by flow cytometry using a blood sample from a healthy volunteer spiked with 3% KG1a cells. Direct staining was performed by adding 20 µl of this dual to 100 µl blood sample.



Immunofluorescence staining and lysing protocol

Flow cytometry method for use with dual and triple combinations

1. Add 100 µl of EDTA-treated blood (i.e. approx. 10^6 leukocytes) to a 5 ml reagent tube. The content of one tube is sufficient to perform one test.
2. Add to each tube 20 µl of labeled monoclonal antibody combination*.
3. Vortex the tube to ensure thorough mixing of antibody and cells.
4. Incubate the tube for 15 minutes at room temperature in the dark.
5. Add 100 µl of IQ Lyse (IQP-199 ready-to-use) and mix immediately.
6. Incubate for 10 minutes at room temperature in the dark.
7. Add 2 ml of demineralized water and incubate for 10 minutes in the dark.
8. Centrifuge the labeled cell suspension for 2 minutes at 1000 x g.
9. Remove the supernatant and resuspend the cells in 200 µl of PBS**.
10. Analyze by flow cytometry within four hours (alternatively, the cells may be fixed by 0.05% of formaline in buffered saline for analysis the next day. Some antigens are readily destroyed upon fixation and this should be taken into account when using this alternative).

* Appropriate mouse Ig isotype control samples can be included in any labeling study

** PBS: Phosphate Buffered Saline, pH 7.2



Handling and Storage

Antibodies are supplied either as 100 tests per vial (1 ml) for singles or 50 tests per vial (1 ml) for dual and triple combinations. They are supplied in 0.01 M sodium phosphate, 0.15 M NaCl; pH 7.3, 0.2% BSA, 0.09% sodiumazide (NaN_3). Store the vials at 2-8 °C. Monoclonal antibodies should be protected from prolonged exposure to light. Reagents are stable for the period shown on the vial label when stored properly.

Warranty Products sold hereunder are warranted only to conform to the quantity and contents stated on the label at the time of delivery to the customer. There are no warranties, expressed or implied, which extend beyond the description on the label of the product. IQ Products is not liable for property damage, personal injury, or economic loss caused by the product.

Characterization To ensure consistently high-quality reagents, each batch of monoclonal antibody is tested for conformance with characteristics of a standard reagent. Representative flow cytometric data is included in this data sheet.

Warning All products contain sodiumazide. This chemical is poisonous and hazardous. Handling should be done by trained staff only.

Explanation of used symbols

	Consult instructions for use
	Catalogue number
	Sufficient for
	Caution, consult accompanying document
	Keep away from (sun)light
	Biological risks
	Temperature limitation (°C)
	For Research Use Only
	Batch code
	Use by yyyy-mm-dd
	Manufacturer

		Label - tandem	Ex -max (nm)	Em -max (nm)
P	PURE	purified material	-	-
F	FITC	FITC	488	519
R	R-PE	PE	488, 532	578
C	CyQ	PE-Cy5.18	488, 532	667
A	APC		595, 633, 635, 647	660
PC	PerCP		488, 532	678
PCC	PerCP-Cy5.5		488, 532	695



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