PRODUCT INFORMATION SHEET

Monoclonal antibodies detecting human antigens

CD7	FITC	**CD56**	R-PE	RUO	REF	IQP-241FR	50 tests

RUO ***For Research Use Only***

Description

CD7 antibodies react with all CD8+ cells, about 90% of CD4+ cells and most NK cells. It is weakly reactive with monocytes and does not react with granulocytes or B cells. The function of CD7 antigen is unknown and the natural ligand for CD7 has not yet been identified. CD7 monoclonal antibodies co-stimulate T cell proliferation and induce second messengers, while soluble recombinant CD7 has been reported to inhibit antigen-specific proliferation and a mixed lymphocyte reaction.
CD7 is a marker for pluripotential stem cell leukemias and T cell acute lymphocytic leukemia (T-ALL). The antigen is frequently lost on large cell T cell lymphomas. The CD7 antigen may also be expressed on myeloblastic leukemias.

Certain subtypes of T cell lymphomas may express the CD56 antigen. These include peripheral T cell lymphoma (NK cell lymphoma: CD56+, EBV+) and T lymphocytic lymphoma (CD56+/-). In addition, the neoplastic counterpart of the NK cell can be characterized as T gamma lymphocytosis, showing expression of a number of antigens, e.g. CD56+, CD7+, CD16+, CD2+/- and CD8+/-.

CD7

Clone B-B7

Isotype Murine IgG1

Specificity CD7 is the earliest antigen marker expressed in the T lineage, being found on T cell precursors in fetal liver and thorax prior to thymic colonization and in thymus and bone marrow. CD7 is expressed on pluripotent haematopoietic cells, most human thymocytes and a major subset of peripheral blood T cells and NK cells.

Clone B-B7 produces mouse IgG1 immunoglobulins which recognizes a 40 kD human T cell and NK cell antigen. It is suitable for the identification of T cells in tissues and diagnosis of T cell neoplasms by immunohistochemistry. Clone B-B7 is also used to analyse T and NK cell subsets and for the characterization of T-ALL and other T cell lymphoblastic leukemias by flow cytometry.

CD56

Clone MOC-1

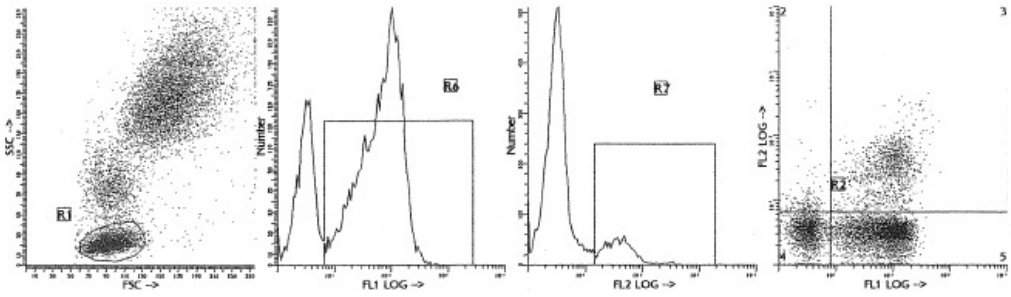
Isotype Murine IgG1

Specificity Clone MOC-1 produces mouse IgG1 immunoglobulins directed against human CD56. MOC-1 has been clustered as CD56 during the Leukocyte Typing Workshop VI [9]. MOC-1 detects an isoform of NCAM on SCLC cells of approximately 145 kDa.

Usage All these reagents are effectively formulated for direct immunofluorescent staining of human tissue for flow cytometric analysis using 10 µl/10^6 leukocytes for singles and 20 µl/10^6 leukocytes in case of dual and triple combinations. Since applications vary, each investigator should titrate the reagent to obtain optimal results.

Representative Data

IQP-241FR (CD7/CD56) was analyzed by flow cytometry using a blood sample from a healthy volunteer. 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.
   For combinations with anti-kappa and/or anti-lambda Ig see application note below.
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*

Application note for anti-kappa and/or anti-lambda Ig combinations

Add 2 ml of PBS containing 0.001% (v/v) Heparin (**prewarmed to 37 °C**) to the cell suspension
Vortex, centrifuge (2 min at 300x g) and discard the supernatant
Repeat this step twice
Resuspend the pelleted blood cells in 100 µl PBS containing 0.001% (v/v) Heparin

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
REF	Catalogue number
	Sufficient for
IVD	In Vitro Diagnostic medical device
	Caution, consult accompanying document
	Keep away from (sun)light
	Biological risks
	Temperature limitation (°C)
RUO	For Research Use Only
LOT	Batch code
	Use by yyyy-mm-dd
	Manufacturer
EC REP	Authorized Representative in the European Community
CE	Conformité Européenne (European Conformity)

		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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