PRODUCT INFORMATION SHEET

Monoclonal antibodies detecting human antigens

Anti-Kappa FITC **Anti-Lambda** R-PE RUO REF IQP-281FR 50 tests

RUO ***For Research Use Only***

Description

Anti-Kappa *Clone* **n/a ; polyclonal goat** *Isotype* **poly Goat F(ab')2, mouse absorbed**

Anti-Lambda *Clone* **n/a ; polyclonal goat** *Isotype* **poly Goat F(ab')2, mouse absorbed**

Intended use

The combination of anti-kappa and anti-lambda is used for the detection of light chains of surface immunoglobulin on normal and neoplastic B cells. They are valuable to study the monoclonal nature (light chain restriction) of lymphoid neoplasms.

Summary

Kappa light chains of human immunoglobulins occur in 50-70% of normal human B lymphocytes while lambda light chains are expressed in 30-50% of these cells.

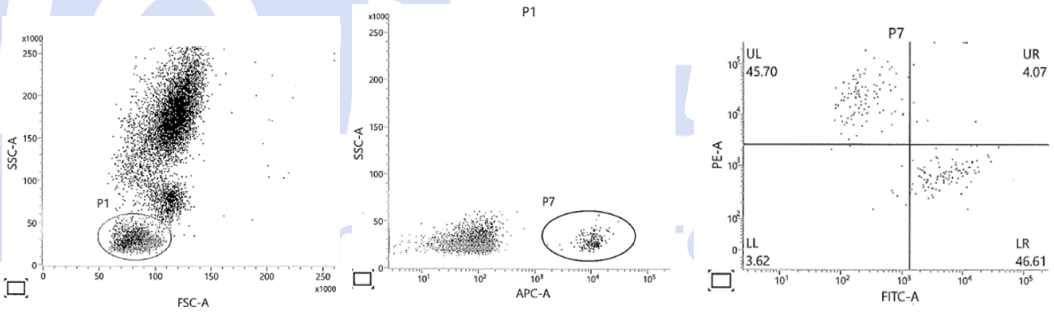
Applications

Polyclonal anti-kappa and anti-lambda antibodies can be applied in flow cytometry for analysis of blood samples in combination with anti-human CD19.

Usage

The reagent is effectively formulated for direct immunofluorescent staining of human tissue for flow cytometric analysis using 10 µl/10^6 leukocytes. Since applications vary, each investigator should titrate the reagent to obtain optimal results.

Representative Data



Staining with the dual anti-kappa FITC and anti-lambda R-PE was performed in combination with anti-CD19 APC, using 20 µl of the conjugated monoclonal antibody and 100 µl of a washed blood sample.

Limitations

1. Conjugates with brighter fluorochromes, like PE and APC, will have a greater separation than those with dyes like FITC and CyQ. When populations overlap, the percentage of positive cells using a selected marker can be affected by the choice of fluorescent label.
2. Use of monoclonal antibodies in patient treatment can interfere with antigen target recognition by this reagent. This should be taken into account when samples are analyzed from patients treated in this fashion. IQ Products has not characterized the effect of the presence of therapeutic antibodies on the performance of this reagent.
3. Reagents can be used in different combinations, therefore laboratories need to become familiar performance characteristics of each antibody in relation with the combined markers in normal and abnormal samples.
4. Reagent data performance is based on EDTA-treated blood. Reagent performance can be affected by the use of other anticoagulants.

Reagents and materials required but not supplied

1. Flow cytometer
2. Flow cytometry disposable 12 x 75-mm capped polystyrene test tubes
3. Micropipette with disposable tips
4. Vortex mixer
5. Centrifuge
6. IQ Lyse - erythrocyte lysing solution (IQP-199)
7. IQ Starfiqs - fixation and permeabilization solution (IQP-200)
8. PBS (phosphate-buffered saline)
9. 1% Heparin
10. 1% paraformaldehyde solution in PBS (store at 2-8 °C in amber glass for up to 1 week)

Immunofluorescence staining and lysing protocol

Suggested 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 2 ml of PBS containing 0.001% (v/v) Heparin (prewarmed to 37 °C) to the tube
3. Vortex, centrifuge (2 min at 300x g) and discard the supernatant
4. Repeat steps 2 and 3 twice
5. Resuspend the pelleted blood cells in 100 µl PBS containing 0.001% (v/v) Heparin
6. Add to each tube 10 µl of labeled monoclonal antibody combination*
7. Vortex the tube to ensure thorough mixing of antibody and cells
8. Incubate the tube for 15 minutes at room temperature in the dark
9. Add 100 µl of IQ Lyse (IQP-199 ready-to-use) and mix immediately
10. Incubate for 10 minutes at room temperature in the dark
11. Add 2 ml of demineralized water and incubate for 10 minutes in the dark
12. Centrifuge the labeled cell suspension for 2 minutes at 1000 x g
13. Remove the supernatant and resuspend the cells in 200 µl of PBS**
14. 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 might be included in any 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.

References

Hristov AC, Comfere NI, Vidal CI, Sundram U. J Cutan Pathol. 2020 Nov;47(11):1103-1110. doi: 10.1111/cup.13858. Epub 2020 Sep 14. PMID: 32870521.

Explanation of used symbols

- Consult instructions for use
- REF — Catalogue number
- Sufficient for
- 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

	Conjugates		Ex -max (nm)	Em -max (nm)
P	PURE	Unconjugated antibody	-	-
F	FITC	Fluorescein Isothiocyanate	488	519
R	R-PE	R-Phycoerythrin	488, 532	578
C	CyQ	Tandem conjugate of R-PE-and Cy5.18	488, 532	667
A	APC	Allophycocyanin	595, 633, 635, 647	660
D	Dy-410	Violet Dye 410	405	460
PC	PerCP	Peridinin-chlorophyll-protein	488, 532	678

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