

Disp&FLOW® - Rapid Isotyping for Mouse Ig

Cat. No.: BIO.065.25

Number of tests: 25

IFU only for field tests



Intended Purpose

Disp&FLOW® Rapid Isotyping for Mouse Antibody is a rapid immunochromatographic test designed for quick and easy qualitative identification of mouse immunoglobulins (Ig) classes, subclasses and light chains from a single sample. The sample used can be purified antibody or cell culture supernatant (or ascites fluid). For purified antibody and cell culture supernatant the test can also be used to determine the relative purity of a hybridoma cell line. This product is for research use only, not for use in diagnostic applications.

Introduction

Antibodies, also known as immunoglobulins (Ig), can take many varieties called isotypes or classes. An isotype is an antigenic determinant of a characteristic common amongst individuals in a species. Isotype refers to the variations or genetic differences in the heavy chain constant region and determines the different classes and subclasses of Ig. The variable region of antibodies, which gives specificity for an epitope, is composed of light chains of two types, kappa (κ) or lambda (λ). Isotypes and light chains type differs in their biological properties, functional locations and ability to treat different antigens. Thus screening for the isotype and light chains type is of capital interest during the production of Ig.

Mode Of Action

The Disp&FLOW® Rapid Isotyping is an immunological lateral flow screening assay that gives the **characterization of an antibody in 10 minutes**. The assay device is in a dipstick format. In the assay, the diluted sample is allowed to run on a series of capillary beds. Following its application to the sample pad, the sample is discharged onto the pre-treated conjugate pad. Mouse antibody isotype conjugate is released upon contact with the flowing sample and forms soluble complexes with the analytes. These complexes travel the length of the membrane and are captured in the test region by anti-isotype antibody immobilized on the nitrocellulose membrane. A line formed in the test region indicates the presence and class, subclass, or light chain type of mouse antibodies in the test specimen. Absence of the line in the test region indicates a negative result. A line in the control region will always appear and indicates a properly functioning test.

Storage And Stability:

- Store the kit box at +2°C to +25°C.
- Do not freeze or expose to elevated temperatures.
- Keep all test strips sealed in the desiccated tube when not in use.
- When stored as detailed above, the Disp&FLOW® Rapid Isotyping kit and components are stable up to the expiration dates printed on the labels.
- Discard any remaining components after their expiration dating.

Materials Provided:

Each kit contains material sufficient for 25 sample determinations.

- BIO.5435.01 - Mouse IgG** (orange arrows strips): **01 Unit**.
Mouse Isotyping strip n°1: white desiccated tube with twenty five (25) test strips for IgG1, IgG2a, IgG2b, IgG2c and IgG3 (lateral flow strips with sample pad, pre-treated conjugate pad, nitrocellulose membrane, wick and orange arrows laminate cover).
- BIO.5435.02 - Mouse Ab** (black arrows strips): **01 Unit**.
Mouse isotyping strip n°2: white desiccated tube with twenty five (25) test strips for κ, λ, IgA and IgM (lateral flow strips with sample pad, pre-treated conjugate pad, nitrocellulose membrane, wick and black arrows laminate cover).
- BIO.5435.DB - Sample Diluent Buffer**: **02 Units**.
Bottles with 5 mL of 50 mM tris buffered saline pH 8.8.
- BIO.5435.RC - Reading Card**: **01 Unit**.
Laminated reading card for both strips n°1 and n°2.

Materials Required But Not Provided:

- 96-Well plate or 5 mL tubes.

Precautions And Warnings:

- Read all instructions before use.
- Each test strip is designed for a single use.
- Treat all specimens and any material coming into contact with them as potentially infectious.
- Wear disposable gloves when handling specimens and kit components.
- Do not mix components of one kit lot with components from other lots.
- Do not use kit components beyond their expiration dates.
- Do not use reagents that show signs of contamination.
- Good Laboratory Practices should be employed to avoid cross contamination of specimens and reagents.
- Dispose in accordance with all local and national laws and regulations.

Specimen Collection And Handling:

No special preparation is required for cell culture/supernatant fluid extraction. No additives or preservatives are required for testing. Use only freshly extracted supernatant fluid.

Experimental Procedure:

- Label all required plate wells or 5 mL tubes with the sample that will be tested. Place the tubes vertically in a tube rack.
- Add 100 µL of Sample Diluent Buffer (Part Number BIO.5435.DB) to each well or tube.
- Add 100 µL of sample (purified antibody previously diluted to 1.0 mg/L or freshly extracted supernatant fluid) to the properly labelled well or tube and vortex to mix.
- Grasp a single test strip by the written upper part and insert the other end vertically into each well or tube required for testing. Do not immerse the strip too deeply, beyond the line indicated by the arrows (see diagram). Do not swirl or mix once the test strip is added.
- Allow for the solution front to travel the length of the lateral flow strip.
- Read results after 10 minutes** but no later than 20 minutes, thanks to the reading card (Part Number BIO.5435.RC) by positioning the strip on the associated position.



Interpretation Of Results:

The lines indicating a positive result may develop towards the areas specified by the printing on the reading card.

Control: A line should develop towards the "control" area. This control line indicates that the test has run properly. If no line develops towards the "control" area, the test results for that lateral flow test strip are considered indeterminate and the sample should be re-tested with a new lateral flow strip. Before starting again with another Disp&FLOW® Rapid Isotyping, it must be ensured that all the instructions for preparation, conservation and implementation of the test have been respected as well as the expiry date.

Positive: A line that develops towards the printing area for the class, subclass, or light chain type indicates the presence of that class, subclass or light chain type in the sample tested.

Negative: If no line develops, except towards the "control" area, that indicates no mouse antibody is present in the sample tested, or at less than 0.5 mg/L.

Note: Do not interpret results after 20 minutes.

Limitation Of The Assay:

Results should be used as an aid in determining the classes, subclasses and light chain types present in the sample tested. As with all rapid immunoassays, this method is presumptive. This lateral flow assay is not intended for quantitative analysis. The test procedure and interpretation of the results must be followed closely to obtain reliable results. Any test in which the control line fails to develop is considered indeterminate, and the sample must be re-tested. Each lateral flow test strip is single use only. DO NOT REUSE. The Disp&FLOW® Rapid Isotyping kit is intended for research use only and is not intended for diagnostic, therapeutic, or commercial use.

Detection limit: depending on cell culture/supernatant fluid, **less than 0.5 mg/L antibodies** can be regarded as being the detection limit.

Warranty:

These products are warranted to perform as described in their labelling and in BIOTEM's literature when used in accordance with their instructions. There are no warranties, which extend beyond this expressed warranty, and BIOTEM disclaims any implied warranty of merchantability or warranty of fitness for a particular purpose. BIOTEM's sole obligation and purchaser's exclusive remedy for breach of this warranty shall be, at the option of BIOTEM, to repair or replace the products. In no event shall BIOTEM be liable for any proximate, incidental, or consequential damages in connection with the products.