

Rapid Hamster Immunoglobulin Isotyping Kit (Cat#: ISO-HAM)

5 minute determination of hamster IgG1/2/3 isotypes and κ light chain

The Rapid Hamster Immunoglobulin Isotyping Kit is a five-minute lateral flow assay with ELISA sensitivity for monoclonal antibody isotype determination. Acceptable sample types include hybridoma culture supernatant and purified monoclonal antibody. Ascites fluid is not recommended since it usually contains multiple immunoglobulins. However, this kit can still be used to determine the relative distribution of the main isotypes in a sample of ascites fluid.

Kit Components

The isotyping kit has two different sizes with 10 or 20 pouches containing two same cassettes per pouch for determining IgG1, IgG2 (*), IgG3 and κ . The strips contain a control line (C).

Sample Requirements and Dilution Conditions

Cell Culture Supernatant	Purified Antibody	Ascites
Recommended dilution is 1:10~1:100 in PBS.	Dilute samples to 0.5 – 2.0 $\mu\text{g/mL}$ in PBS	Ascites fluid is not recommended since it usually contains multiple Igs. The recommended dilution is 1:10,000 in PBS.

Protocol

- 1) Place the cassettes in horizontal plane.
- 2) Add 80-100 μL antibody solution directly to the Sample Well. Wait for 5 minutes.
- 3) A red test line at the location corresponding to antibody-specific isotype and a red control line at “C” position will appear within 1-5 minutes.

NOTE: Do not read after 20 minutes. If the color of tissue culture medium causes high background, 40-60 μL PBS can be chased to clear the background. Promptly return unused strips in sealed bag and keep dry.

Result Interpretation

1. Invalid result: no red line at “C”.
2. Negative result: only one red line at “C”.
3. Positive results:

a). Single monoclonal antibody: In addition to the positive control “C” line, only one heavy chain and one light chain will appear.

b). Multiple monoclonal antibodies: Besides the positive control line, more than one heavy chain and/or light chain will appear. The line intensity can be used to judge the dominant isotypes.

Performance and Species Specificity

Minimal detection limit is $<1 \mu\text{g/mL}$. The reactivity for Igs from the two major hamster species is:

Banding	Armenian	Syrian
IgG1	A.	S.
IgG2/3	A. IgG2/3	S. IgG2
IgG3	A. IgG3	—
κ	A.	S.

Storage

Store the strips in their original package at room temperature. This product is stable for up to 18 months from the certified date. Freezing the strips is not recommended.

* Note

Unlike in the cases for mouse and rat, reagents specifically recognizing hamster antibody isotypes are not very common. The available IgG2-recognizing antibody also cross-reacts to IgG3 of the Armenian strain (See above table). Due to the lack of specific reagents, possible IgM and λ chains can only be inferred by the absence of IgG and κ signals.



Examples

Monoclonal Armenian hamster IgG1/k, IgG2/k, IgG3/k and IgM/k diluted in PBS was added to each cassette, respectively. IgG2 antibody only shows a band at “G2/3” position, whereas IgG3 antibody shows two bands at “G2/3” and “G3” positions. Photos were taken in 5 min.