

Product Information

IsoQuick™ Strips and Kits for Mouse Monoclonal Isotyping

Catalog Numbers **ISOQ5, ISOQ25, I9285, I9410, and I9535**

Storage Temperature 2–8 °C

TECHNICAL BULLETIN

Product Description

The IsoQuick™ strips, whether purchased in kits (ISOQ5 and ISOQ25) or separately, are designed to detect and identify mouse isotypes in cell culture supernatant, ascites, or purified antibody. Optimum detection range is 0.1–4 µg/ml, with a detection limit of 10 ng/ml. IsoQuick strips have been validated for use with mouse monoclonal antibodies and have not been validated for use with other host antibodies. For use in matrices other than those listed, please contact Technical Service.

The IgG strips (I9285) are designed to detect and identify mouse IgG1, IgG2a, IgG2b, and IgG3 isotype subclasses.

The IgA/IgM strips (I9410) are designed to detect and identify mouse IgA and IgM isotype classes.

The Kappa/Lambda strips (I9535) are designed to detect and identify mouse kappa or lambda isotype lightchains.

The IsoQuick Kits, ISOQ5 and ISOQ25, contain 5 or 25 of each IsoQuick strip (I9285, I9410, and I9535).

The strips come ready-to-use and provide results in 5 minutes or less. They can be used individually or in combination with the same prepared sample for customized results. (see Preparation Instructions for the type and amount of sample needed.)

Each strip has an absorbent pad at each end. The protective tape with the arrow indicates the end of the strip to insert into the reaction vial. The sample will travel up the membrane strip and be absorbed into the larger pad at the top of the strip. The portion of the strip between the protective tape and the absorbent pad at the top of the strip is where the reaction takes place, and where result and control lines are viewed.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

All three strips require the same sample preparation, and they may be used together or serially in the same sample.

In order to detect the target antibody, some samples must first be diluted in common laboratory buffer (phosphate buffered saline or similar buffer).

Cell culture supernatant can be run without dilution.

Ascites - dilute 1:10,000 to 1:100,000

Purified antibody - dilute to 0.1–4 µg/mL

You may run the IsoQuick strip in many types of reaction vessels. Autoanalyzer vials (0.5 mL) are recommended. The volume of sample required depends on the number of IsoQuick strips to be run concurrently. The following sample volumes are recommended for use with 0.5 mL vials:

1 strip - 150–200 µL

2 strips - 200–300 µL

3 strips - 300–400 µL

Note: The sample volume must be sufficient to wick up the IsoQuick strip, but not flood the strip. The sample level in the bottom of the reaction vessel should be above the bottom end of the colored label, but not higher than the flat end of the arrow on the colored label (see Figure 1).

Storage/Stability

Store the strips at 2–8 °C. When stored properly, the strips remain active for at least one year.

Procedure

These strips are designed to screen for the presence or absence of isotypes only, and are not meant to be quantitative. The darker the result line, the more immunoglobulin is present in the sample.

IsoQuick IgG strips can be used for semiquantitative determination of the IgG titer in a cell culture supernatant sample. For semiquantitative measurement, run IsoQuick strips with standards of known titer (1,000 $\mu\text{g/mL}$, 100 $\mu\text{g/mL}$, and 10 $\mu\text{g/mL}$). Then compare the color of the result line for the sample to those obtained with the standards, either visually or using a color absorbance reader. The color intensity is representative of the titer of the sample.

The assay has been optimized to be used with the described procedure. Deviation from this procedure may affect the validity of the test results. As with all tests, it is recommended that results be confirmed by an alternate method when necessary.

1. Allow refrigerated canisters to come to room temperature before using the strips. Remove the strips to be used. Avoid bending the strips. Reseal the canister immediately.
2. Add sample (see Preparation Instructions) to the reaction vial. There must be sufficient volume to wick up the IsoQuick strip, but the sample level should be no deeper than 1.5 cm (15 mm). The sample level in the bottom of the reaction vessel should be above the bottom end of the colored label, but not higher than the flat end of the arrow on the colored label (see Figure 1). Autoanalyzer vials (0.5 mL) are recommended.
3. Insert the strip into the sample making sure the strips are upright. The sample will travel up the strip.
4. Allow the strip to develop for 5 minutes before making final interpretations. Positive sample results may become obvious more rapidly.
Note: A strong positive result may be safely interpreted in as little as 2 minutes after sample addition. It is not safe, however, to interpret negative results prior to 5 minutes.
5. To retain the strip, cut off and discard the bottom section of the strip covered by the arrow tape. This inhibits further reaction and allows the strip to be used for future documentation.

Results

Development of the control line within 5 minutes indicates the strip functioned properly. Any strip that does not develop a control line should be discarded and the sample retested using another strip.

Negative Result - If no isotype classes, subclasses, or light chains (depending on the the test strip) are present, the strip will only show the control line.

Positive Result - If the sample contains the appropriate isotypes, the strip will develop a test line. The results line will appear pink to red depending on the strength of the reaction. Only one test line should develop (see Figure 1).

If more than one test line appears, this may indicate the presence of multiple isotype classes, subclasses, or light chains (depending on the the test strip). The additional subclasses may come from ascites host immunoglobulins, myeloma cell lines, or fusion partners.

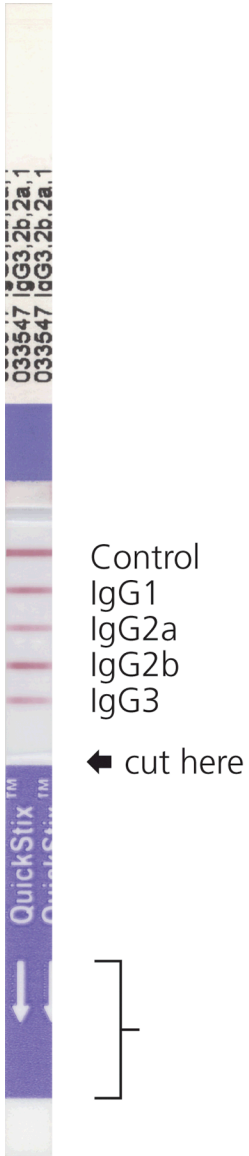
The dominant isotype classes, subclasses, or light chains (depending on the the test strip) should develop the strongest test line. **If results are difficult to interpret, dilute the sample and run another strip.** Diluting the sample will decrease detection of interfering subclasses and confirm the predominant subclass.

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Figure 1.
Interpretation of IsoQuick Strips

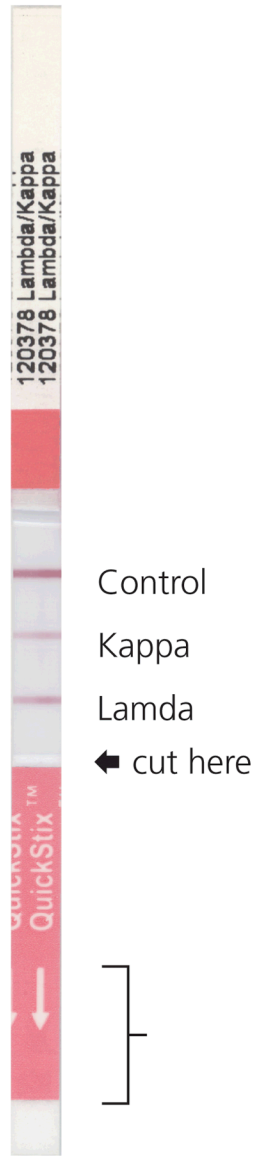
IgG strips
(IgG1, IgG2a, IgG2b, and IgG3)



IgA/IgM Strips



Kappa/Lambda Strips



The sample level must be within the bracketed area, above the bottom end of the colored label, but not higher than the flat end of the arrow.

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