

# InvictDetect™ Plus ImmunoStrip®

Detection Kit for *Solenopsis invicta*, *S. richteri*, *S. invicta* x *S. richteri*

Product Number: 69800



## KIT INFORMATION

### Intended Use

This test is intended to identify the red imported fire ant, *Solenopsis invicta*, by detection of the *Soli2* protein; the black imported fire ant, *Solenopsis richteri*, by detection of the *Solr2* protein; and *Solenopsis invicta* x *richteri* hybrids. The test is appropriate for testing a pooled sample containing five (5) worker ants. This protocol is not intended for individual ant testing.

### Storage of Kit

Kit contents should be stored at room temperature (18 - 30 °C). ImmunoStrips should be tightly sealed in the desiccated container at all times.

### ImmunoStrip Kit (ISK) Includes:

- ImmunoStrips (10)
- AEB2 Buffer (3 mL)
- 100 µL exact volume pipette (10)
- Plastic pestle (10)
- 1.5 mL microcentrifuge tube (10)
- User guide

### Required But Not Included:

- Timer
- Tools for ant collection

## SAFETY PRECAUTIONS

ImmunoStrips and AEB2 buffer are non-hazardous.

**\*\*\* WARNING \*\*\*** While collecting ants for testing, handle with caution. Imported fire ant stings can cause local and systemic allergic reactions.

## PREPARING THE SAMPLE

Ants must be homogenized in AEB2 buffer. For best results, each ant sample must contain five ants.

1. Fully press the top bulb of the 100 µL exact volume pipette, insert the tip of the pipette in the AEB2 buffer, release the top bulb, and transfer the AEB2 buffer to the 1.5 mL sample tube.
2. Collect five worker ants and place them in the 1.5 mL sample tube filled with 100 µL AEB2 buffer. Chilling the ants by placing them on ice or into a freezer briefly may facilitate their transfer.
3. Push the ants into the bottom of the tube with a plastic pestle and macerate the ants thoroughly with the plastic pestle until all ants have been homogenized (about 30 to 45 seconds).

## PERFORMING THE ASSAY

When handling ImmunoStrips, always grasp the top of the ImmunoStrip marked with the test name. Do not remove the protective covering.

1. Remove an InvictDetect Plus ImmunoStrip from the container. Keeping ImmunoStrip in a vertical position, insert the end marked "sample" into the sample extract in the microtube
2. For most positive samples, the test line should develop within ten (10) minutes. However, allow the ImmunoStrip to react for 30 minutes to allow weak positive results to develop.
3. Remove the ImmunoStrip and interpret results.

## INTERPRETING RESULTS

Use the images provided as a guide to interpret results. If storing the strip as a permanent record, immediately cut the sample pad (colored end marked “sample”) off the strip, then press the ImmunoStrip between paper towels to remove excess liquid.

If the control line is visible and either test line is also present at any intensity of pink/ purple, this indicates a positive result.

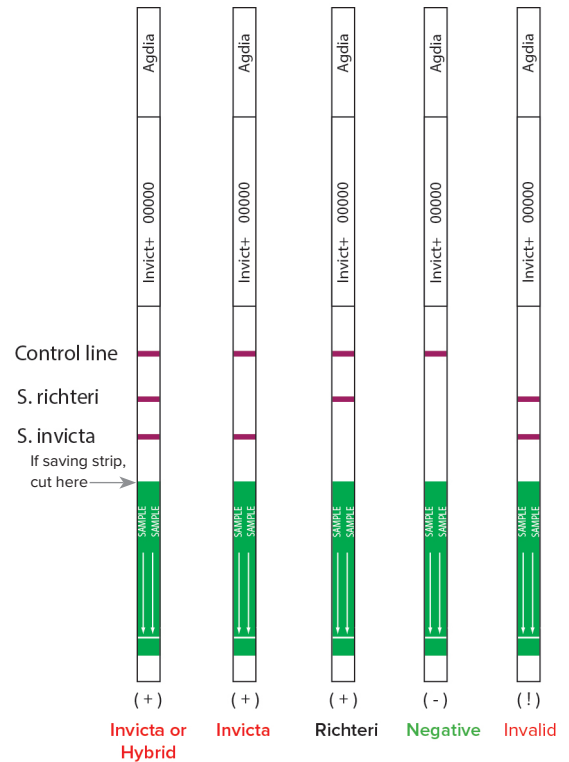
If both the *S. invicta* and *S. richteri* test lines are present, the sample is positive for *S. invicta* or *S. invicta* × *richteri* hybrid.

If only the *S. invicta* test line is present, the sample is positive for *S. invicta*.

If only the *S. richteri* test line is present, the sample is positive for *S. richteri*.

If only the control line is present, this indicates a negative result.

The control line assures that the test is working properly. If the control line does not appear, the test is invalid, even if a test line is visible (see troubleshooting).



## TROUBLESHOOTING

Control line did not develop.	This situation is generally caused by over-submergence of the test ImmunoStrip in the sample extract.  If no control line is present, results should be considered invalid, and the test should be repeated.
Test runs very slow or not at all.	This can be caused by using too much sample for extraction. Repeat the test.  If the above is not the case, make sure the test components were warmed to temperature before use and are within their expiration date.
Test and / or control line is weak.	The test line may be weak due to low levels of <i>S. invicta</i> or <i>S. richteri</i> venom in the sample.  Make sure the test is within its expiration date.  If kit contents were left open too long, the ImmunoStrips could have absorbed moisture, which can affect test results. Be sure to always keep the ImmunoStrip vial tightly sealed between uses.

## QUESTIONS OR TECHNICAL SUPPORT:

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Web: [www.agdia.com](http://www.agdia.com)

**Reference:** Steven M. Valles, Charles A. Strong & Anne-Marie A. Callcott. Development of a lateral flow immunoassay for rapid field detection of the red imported fire ant, *Solenopsis invicta* (Hymenoptera: Formicidae). *Anal Bioanal Chem* (2016) 408:4693–4703.