



Strategic Diagnostics Inc.



Test and Be Sure

Seed✓ Cry3Bb Test Strips

Part Number 300004

Seed & Leaf Testing



Intended Use

The intended use of the kit is the qualitative (yes/no) determination of the Cry3Bb1 protein in YieldGard Rootworm® corn leaf and seed samples.

Product Description

The Seed✓ Cry3Bb Test Kit detects the Cry3Bb protein produced by a gene, derived from *Bacillus thuringiensis* (*Bt*), that is found in commercial corn varieties sold under the YieldGard® Rootworm trade name. The lateral flow test strip has been optimized to easily detect the Cry3Bb protein. The lateral flow strips in this package are sufficient to detect the presence or absence of the Cry3Bb protein in up to 50 corn leaf or seed samples.

Principle of the Assay

The assay uses a double antibody sandwich format. Antibodies specific to the Cry3Bb protein are coupled to a color reagent and incorporated into the lateral flow strip. When the lateral flow strip is placed in a small amount of an extract from plant tissue that contains Cry3Bb protein, binding occurs between the coupled antibody and the protein. A sandwich is formed with some, but not all the antibody that is coupled to the color reagent. The membrane contains two capture zones, one captures the bound Cry3Bb protein and the other captures color reagent. These capture zones display a reddish color when the sandwich and/or unreacted colored reagents are captured in the specific zones on the membrane. The presence of only one line (control line) on the membrane indicates a negative sample and the presence of two lines indicates a positive sample

Contents of Kit

Seed✓ Cry3Bb Test Strips

Quantity

50

Purpose

The Seed✓ Cry3Bb Test Kit has been designed to screen corn seed and leaf samples for the presence of the Cry3Bb protein. Sample preparation procedures are outlined below. Please refer to the instructions to be sure that all of the necessary materials are available prior to testing.

Materials Required but not Supplied:

Sample tubes, 1.5 ml (3000411)
Weigh paper or waxed paper
Pliers for crushing seed
User Guide

Storage and Preparation of Reagents

The Seed✓ Cry3Bb Test Strips can be stored at room temperature or refrigerated. Do not freeze. Once opened the Seed✓ Cry3Bb lateral flow test strips must be stored in the closed canister with the indicating moisture card. The moisture-indicating desiccant pack must be blue in color. If the moisture-indicating card is pink, contact SDI Technical Service. Storage conditions higher than room temperature may adversely affect performance

Single Corn Seed Sample Preparation

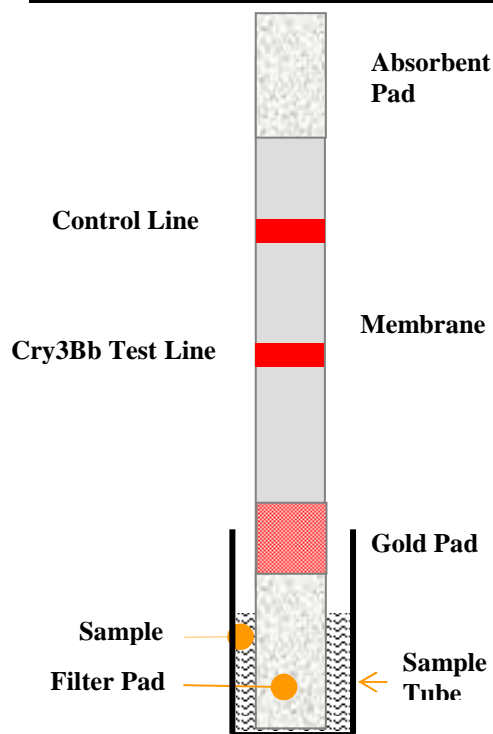
1. Place a corn seed on a piece of weigh paper or waxed paper.
2. Fold the paper over the corn seed and crack or smash into small pieces using pliers or other suitable means.
3. Put the cracked seed into a 1.5-mL sample tube and add about 0.75mL of water to the tube.
4. Let the tube stand for 3-5 minutes while shaking intermittently or stirring with the stirrer.
5. Insert the labeled Filter Cover of the Seed✓ Cry3Bb lateral flow test strip into the sample tube containing the seed sample extract. The arrows on the filter cover should point into the tube. Allow the test strip to remain in the tube in an upright position for 5 minutes.
6. Proceed to *Interpreting the Lateral Flow Test Strip*

Leaf Sample Preparation

1. Fold a fresh corn leaf twice and place the four thickness between the body and cap of a 1.5 ml sample tube and snap the cap into place.
2. Open the cap and remove the excess leaf tissue from around the tube opening.
3. Push the leaf tissue into the tube with the stirrer. (This provides about 30-50 mg of leaf tissue. The appropriate amount of tissue may be obtained by other means.)
4. Add about 0.5 mL (to the top of the tapered part of the tube) of water to the sample tube containing the leaf sample.
5. Macerate the leaf material with a clean stirrer for about a minute.
6. Insert the labeled Filter Cover of the Seed✓ Cry3Bb lateral flow test strip into the sample tube containing the leaf sample extract. The arrows on the filter cover should point into the tube. Allow the test strip to remain in the tube in an upright position for 5 minutes.
7. Proceed to *Interpreting the Lateral Flow Test Strip*.

Caution: The Seed✓ Cry3Bb test is sensitive. Be careful to not contaminate the leaf sample discs by touching them with your fingers, a stirrer or other material that may have touched another leaf sample.

Illustration of a Lateral Flow Strip



Note: Some leaf samples may produce a light brown or greenish-yellow color at the test line. **This is a negative result.** A positive result produces a distinct reddish color.

Interpreting the Lateral Flow Strip Test

Check the test strips 5 minutes after inserting the strip or comb. At least one line, the Control Line, should always develop approximately one (1) cm down from the Absorbent Pad. A red line in this position indicates that the strip is functioning properly. A red line appearing below the Control Line is the Cry3Bb Test Line and indicates a positive result for Cry3Bb protein. If the test strip displays two (2) red lines, the test is complete and the sample is positive for Cry3Bb traits. If at 5 minutes the test strip only shows a clearly visible Control Line, then the sample is negative for Cry3Bb transgenic traits. If no control line develops, the result is inconclusive and need to be repeated.

Illustration of Positive and Negative Results



Example of an unreacted, negative (1-line) and positive (2-lines) test strip

Warranties and Liabilities

Strategic Diagnostics Inc. (“SDI”) warrants the Products manufactured by it will be free of defects in materials and workmanship when used in accordance with the applicable instructions for a period equal to the shorter of one year from date of shipment of the Product(s) or the expiration date marked on the Product packaging. Application protocols published by SDI are intended to be only guidelines for the Buyers of the Products. Each Buyer is expected to validate the applicability of each application protocol to in their individual applications. **SDI MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED. THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

SDI’s sole obligation with respect to the foregoing warranties shall be, at its option, to either replace or to refund the purchase price of the Product(s) or part thereof that proves defective in materials or workmanship within the warranty period, provided the customer notifies SDI promptly of any such defect. **SDI SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM ECONOMIC LOSS OR PROPERTY DAMAGES SUSTAINED BY BUYER OR ANY CUSTOMER FROM THE USE OF THE PRODUCT (S).**

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