

## **CDIA™ Transgene Cry1 Ab/Ac Colloidal Gold Test Kit (Crops)**

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*Cat. No.: DTSJZ018*

*Pkg. Size: 25T*

### **Intended Use**

This kit for Cry1 Ab/Ac is intended to qualitatively determine the presence of the Cry1Ab/Ac Bt endotoxins in genetically modified organisms from crops such as cotton or corn, etc.

### **General Description**

BT Cry1 is a gene found in *Bacillus thuringiensis*, a gram-positive bacterium that produces a toxin that can be utilized as a pesticide. The gene BT Cry1 encodes the protein that is toxic to insects. When expressed and produced in crops such as cotton, corn, it acts as a built-in insecticide for the plants. Due to the protein's toxic nature, there are concerns that this gene will have a negative impact on the consumer's health.

CDIA™ Transgene Cry1 Ab/Ac colloidal gold test for Cry1 Ab/Ac is designed to extract and detect the presence of the Cry1 Ab/Ac Bt endotoxins at the levels typically expressed in genetically modified crop plant tissue.

### **Principle of the Test**

Based on the principle of double antibody sandwich immunochromatography, the antigen in the sample in the lateral movement of the colloidal gold-labeled specific monoclonal antibody binding to form antigen-antibody complex, continue to the front flow and NC membrane test region specific anti monoclonal antibody binds to form a double antibody sandwich complex. The result is the formation of a colored band in the test region. If there is no BT Cry1 in the sample, the area will remain colorless. The sample continues to move to the control area and forms a pink to purple color, indicating the test is working and the result is valid.

### **Reagents and Materials Provided**

1. Strip, 25T
2. Kit insert

### **Sample Preparation**

#### **To extract seed:**

A single seed sample can be ground and then extracted with water in a tube. The sample preparation is a crucial procedure for the proper function of the test. The ratio of water in milliliters (mL) to the weight of the seed sample

(g) should be close to 1.25. Seal the tube cap and shake the tube gently for 15-25 seconds. Allow the solid material to settle to the bottom of the tube. And the sample will be ready for testing.

**To extract leaf tissue:**

Take a 1-inch x 1-inch leaf punches from the sample leaf tissue; push the leaf punches into the tube by a pestle. Then squeeze 10 drops of water into tube and grind the tissue using the pestle.

The test is suitable for testing both leaf tissue and seed of corn, cotton, and other crops. Leaves, seedlings, or seeds must be ground and diluted with buffer or water. For best result, different samples should be diluted with water in different ratio. Let the paste set for at least 45 seconds before testing with the test kits.

Sample	Sample to water/buffer ratio	Weight of Samples	Volume of water/ buffer
Single corn leaf	1:20	0.2 g	4 mL
Corn seeds	1:5	0.2 g	1 mL
Multiple leaves	1:10	0.2 g	2 mL
Cotton seeds	1:10	0.2 g	2 mL

**Assay Procedure**

1. Allow refrigerated canisters to come to room temperature before opening.
2. Remove the strips to be used, reseal the canisters immediately.
3. Avoid bending and making the strips wet; Always grasp the top of the strip marked with the test name. Keep the strips in a vertical position, insert the ends of the strips into the tube or bag that contains the sample. Do not allow sample to pass the "Max" line.
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5. Wait 2-5 minutes for the result. If there is only one line appears, allow the strip to develop for an extra 10 minutes before making a final assay interpretation. The result will be invalid after minutes.

**Result Interpretation**

The appearance of control line indicates that the strip has functioned properly. If the control line does not appear in 10 minutes, use another strip to retest the example. If the sample extract contains Cry1 Ab or Cry1 Ac endotoxins, a second line (Test Line) will develop on the membrane under the control line. The test is complete and the sample is positive for Cry1 Ab or Cry1 Ac.

## Limit of Detection

Limit of detection: 2 ng/mL

## Storage

Store at 25°C for 6 months, 2-8°C for 2 years.

## Note

1. Open the bag and should be used immediately.
2. Distilled water or deionized water can't be used as a negative control.
3. One-time use of the detection card can't be reused.
4. The test card is only used for Bt gene screening, positive results of the specimens, the proposed genetic testing methods to confirm.