Warnings and Precautions:

This product utilizes a lateral flow chromatographic double-antibody sandwich method to detect labeled reporter molecules for Cas12/13 assays. Users simply need to label one end of the synthetic reporter molecule with Biotin and the other end with FITC (Fluorescein Isothiocyanate) or 6-FAM (6-Carboxyfluorescein).

This strip is designed to detect Cas enzyme cleavage products from nucleic acid amplification targets (such as PCR, LAMP, RPA/RAA).

Intended Use:

Detection of Cas enzyme cleavage products.

Packaging & Storage:

- **Packaging:** 50 strips/tube, moisture-proof aluminum foil bag.
- **Cat. No.:** JY0301
- **Storage:** Store in a dark, dry place at **4–30°C**.
- **Shelf Life:** 12 **months**. After opening, reseal the tube cap tightly and store in a dry, dark place at 4–30°C (valid for 6 months)

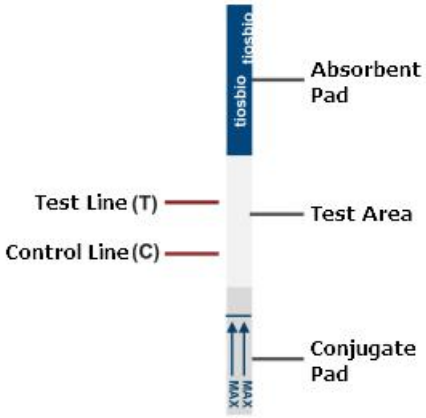

Fig 1. Schematic Diagram of Disposable Nucleic Acid Test Strip

Sample Pad (Conjugate Pad): The area where the sample solution binds and initiates the detection process.

Test Area (Nitrocellulose Membrane): The region for observing and interpreting test results (containing Test and Control lines).

Absorbent Pad: Absorbs excess liquid during the assay to maintain flow.

Protocol:

1.Take out the required number of strips and mark the absorbent pad (Fig. 1). Each strip is for single use only.

2.Sample Preparation:

oIf the cleavage product volume is 50–100 μL, it can be detected directly in a 200 μL PCR tube.

oIf the volume is less than 50 μL, add ultrapure water to the PCR tube to bring the volume up to 50 μL and mix well.

3.Dilution: After CRISPR digestion of PCR, LAMP, RPA, or RAA products, dilute the cleavage product 2–20 fold (adjust based on product type and reaction system).

4.Detection: Insert the Sample Pad end (arrow end) of the strip into the reaction tube containing the diluted cleavage product (>50 μL). Ensure the liquid level does not exceed the top of the sample pad (Fig. 1).

5.Reading: Wait until the reading window is fully wetted (approx. 1–2 min; may take longer in low temperatures). Once the Control Line (C-line) appears, remove the strip, lay it flat, and read the result immediately.

6.Timing: Read results within 10 minutes after the C-line appears. Results read after 10 minutes are invalid.

7.Disposal: Record results and dispose of the strip safely in a sealed bag.

Result Interpretation:

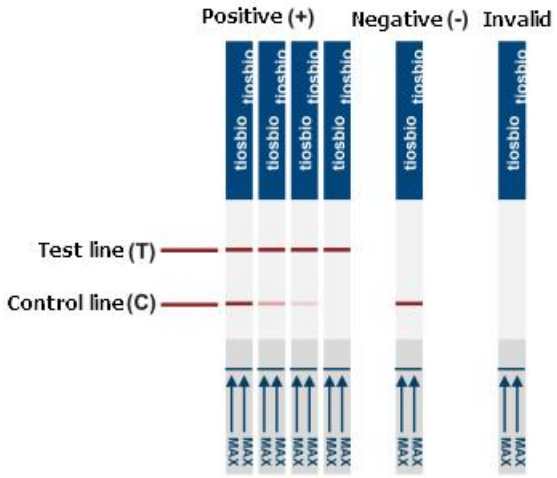

Fig2. Cas12/13Result Interpretation Guide for Cas12/13 Dedicated Nucleic Acid Test Strips

1. **Positive（+）：**
    - Both Control Line (C) and Test Line (T) appear red.
    - Only Test Line (T) appears red (Control Line C does not appear).
    - *Note: Both scenarios indicate effective Cas12/13 cleavage activating the reporter.*

2. **Negative（-）：**
   Only Control Line (C) appears red; Test Line (T) is not visible. This indicates Cas12/13 failed to cleave the reporter.

3. **Invalid：**
   No bands appear on either C or T lines. This suggests the strip or reagents may be damaged/expired, or an operational error occurred. Retest with a new strip

Precautions & Safety:

- **Reporter Requirement:** Must be used with Biotin and FITC/FAM labeled reporters. Impure reporters (containing free Biotin or FITC) may cause false positives (red T-line in negative controls).
- **Negative Control Optimization:** Recommended reporter concentration range: **10–100 nM**. Perform a gradient dilution to find the concentration where only the C-line appears (no T-line) as the negative control baseline. Use this to calculate the optimal working concentration for your CRISPR system.
- **For Research Use Only (RUO).** Follow instructions strictly.
- **Storage:** Improper storage or use of expired products may lead to erroneous results. Use strips as soon as possible after opening to avoid moisture damage.
- **Single Use:** Do not reuse strips. Dispose of properly after use.