



## N-Glycan Analysis Kit (DCQA-2308-1)

This product is for research use only and is not intended for diagnostic use.

### PRODUCT INFORMATION

<b>Target</b>	N-Glycan
<b>Size</b>	5 Samples/Kit
<b>Storage</b>	<p>IgG , 2-8°C, 12 months</p> <p>PNGase F, -25~-15°C, 12 months, avoid repeated freezing and thawing;</p> <p>PNGase F buffer, 2-8°C, 12 months;</p> <p>Surfactant, room temperature, 12 months</p> <p>Marker, 2-8°C, 12 months</p> <p>DMF , room temperature, 12 months</p> <p>Wash buffer and sample diluent, room temperature, 12 months;</p> <p>Extraction column, room temperature.</p>
<b>Sample</b>	Monoclonal antibodies
<b>Intended Use</b>	<p>CD provides information on routine care and use of the N-Glycan Assay Kit for N-Glycan Rapid Enzyme Release and Rapid Labeling. This protocol was validated using monoclonal antibodies and has been tested for a variety of other N-linked glycoproteins. We recommend that users confirm the enzyme release for their specific samples.</p>
<b>Reagents And Materials Provided</b>	<ol style="list-style-type: none"> <li>1. IgG</li> <li>2. PNGase F</li> <li>3. PNGase F buffer</li> <li>4. Surfactant</li> <li>5. Marker</li> <li>6. DMF</li> <li>7. Wash buffer</li> <li>8. Sample diluent</li> <li>9. Extraction column</li> </ol>
<b>Materials Required But Not Supplied</b>	<p>Take 1 sample as an example</p> <p>(1) 0.85% NaCl 100µL; Acetonitrile (LCMS); Ultrapure water;</p>

(2) 15/85 water/acetonitrile solution 2mL; 1/9/90 formic acid/ultrapure water/acetonitrile 20mL; 0.2mL PCR tube, 1.5mL centrifuge tube; PCR machine.

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## Assay Procedure

### Step 1: Rapid Glycosyl Release

- (1) Weigh the IgG sample powder into 0.85% NaCl solution so that the final IgG concentration is 2 mg/mL.
- (2) Glycosyl release buffer: Weigh 3 mg of surfactant and dissolve in 60  $\mu$ L of PNGase F buffer, mix well and place at room temperature (this buffer is ready for use).
- (3) Add 20  $\mu$ L of IgG sample to a PCR tube, add 3  $\mu$ L of glycosyl release buffer, mix by pipetting, then add 3.3  $\mu$ L of ultrapure water, pipette and disperse to make it evenly mixed.
- (4) Heat the above mixture on a PCR instrument at 90°C for 3 minutes to denature it, then take out the PCR tube and cool it at room temperature for 3 minutes.
- (5) Add 1.2  $\mu$ L PNGase F, aspirate and disperse to make it evenly mixed, and incubate the mixture on a PCR machine at 50°C for 5 min. During this waiting period, labeling reagents can be prepared.
- (6) After the reaction is complete, take out the PCR tube and cool it at room temperature for 3 minutes.

### Step 2: Rapid labeling of glycans

- (1) Labeling reagent: Weigh 1.36mg maker into 10  $\mu$ L anhydrous DMF (6 $\mu$ L is required for each sample, adjust the preparation amount according to the number of samples, the labeling reagent is prepared and used immediately).
- (2) Add 6  $\mu$ L of labeling reagent solution to the mixture in the PCR tube, aspirate and disperse 5 times to ensure mixing, and react at room temperature for 5 minutes.
- (3) Add 179  $\mu$ L of acetonitrile and mix well for purification.

### Step Three: Purification

- (1) Prepare solid phase extraction column, 1mL/5mL pipette gun, waste liquid cup, and clean 1.5mL centrifuge tube.
- (2) Activation: Take 200 $\mu$ L of ultrapure water and add it to the small column, and use a pipette gun to slowly and uniformly pump the liquid from above to the waste liquid cup.
- (3) Equilibration: Take 200 $\mu$ L of 15/85 water/acetonitrile solution to equilibrate the column (same method as above).
- (4) Sample loading: Load the sample diluted with acetonitrile, with a total volume of about 200  $\mu$ L.
- (5) Take 600 $\mu$ L of 1/9/90 formic acid/ultrapure water/acetonitrile to wash the column twice to the waste cup.
- (6) Take away the waste liquid cup and replace it with a clean 1.5mL centrifuge tube.
- (7) Add two portions of 50 $\mu$ L elution buffer to the small column, pipette slowly and at a constant speed, and elute sequentially into clean centrifuge tubes.
- (8) Add 200 $\mu$ L (recommended amount, which can be adjusted according to the sample, testing equipment, etc.) of sample diluent, mix well, and wait for the test on the machine.

### Step 4: HILIC-FLR detection and analysis

- (1) Column ACQUITY UPLC<sup>®</sup> Glycan BEH Amide, 130 Å, 1.7  $\mu$ m, 2.1  $\times$  150 mm (waters p/n 186004742).
- (2) Column temperature: 60°C.
- (3) Mobile phase A: 50 mM ammonium formate (LC-MS grade is recommended) solution,

pH=4.4.

(4) Mobile phase B: 100% acetonitrile (LC-MS grade is recommended).

(5) Flow rate: 0.4 mL/min;

(6) Gradient:

(7) FLR wavelength: EX 265/EM 425 nm;

(8) FLR sampling rate: 2 Hz;

(9) Injection volume: 10 $\mu$ L (recommended volume, which can be adjusted according to samples, testing equipment, etc.). **Note: The above parameters are based on a mass spectrometer equipped with an "ACQUITY® RDa" detector.**

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**Typical Standard Curve**

Example of Fluorescent Signal Intensity:

Example of total ion current:

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**Precautions**

1. Please wear a lab coat and gloves.
  2. Use clean pipette tips each time you dispense.
  3. Please store and use relevant reagents according to the instructions.
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