

# Produktinformation



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# NT-proBNP

### HumaFIA SR

# Fluorescence immunoassay for the quantitative determination of N-terminal probrain natriuretic peptide (NT-proBNP)

Package Size	25 tests/kit	
REF	16090/30	
IVD		

#### Intended Purpose

NT-proBNP HumaFIA SR is a fluorescence immunoassay for the quantitative determination of NT-proBNP in human whole blood/serum/plasma.

N-terminal pro-brain natriuretic peptide (NT-proBNP) is a cardiac neurohormone secreted by the ventricle, and the level of NT-proBNP increases when cardiomyocytes are subjected to volume load and pressure load. NT-proBNP can be used as an adjunction to the diagnosis and monitoring of mild cardiac dysfunction in individuals suspected of having congestive heart failure, as well as to assess the severity of patients with congestive heart failure and the risk grade of patients with acute coronary syndrome and congestive heart failure, as well as to monitor the treatment of patients with left ventricular dysfunction.

For professional in vitro diagnostic use only.

#### **Test Principle**

The test uses a sandwich detection method to determine NT-proBNP in human whole blood/serum/plasma. When an adequate volume of test sample is dispensed into the sample well of the test cartridge, the sample migrates by capillary action across the cartridge. NT-proBNP, if present in the sample, will bind to the NT-proBNP antibody conjugates, and flow downstream. The immunocomplex is then captured on the nitrocellulose membrane by the pre-coated another NT-proBNP antibodies, forming antibody-antigen-antibody complexes. The more antigen contained in sample the more complexes are present and leads to a stronger fluorescence signal, which is processed by the instrument for the test to show NT-proBNP concentration in the sample.

#### **Reagents and Contents**

RGT	25 tests	Reagent cartridge, labelled as NT-proBNP
		, individually sealed foil pouches
CAL	1 card	Calibration card, for upload of calibration curve into
		the analyzer.

#### Applicable instrument

REF	
16090	HumaFIA

#### Storage/Stability

ι	Jnopened at 430°C	Up to the stated expiration date. Do not use
		beyond the expiration date
(	Opened pouch at 18-	Test should be used within 1 hour
2	28°C	

#### **Reagent preparation**

#### Specimens

**1**. Sample type: whole blood, serum or plasma (using Heparin as the anticoagulant). Other sample types have not been evaluated.

2. Venous blood should be collected in a sterile condition. heparin can be used for anticoagulation in plasma or whole blood. Anticoagulants other than heparin are not recommended.

3. After clinical blood samples are collected, the test should be completed within 2 hours at room temperature of 18-28 °C. If the test cannot be carried out in time, it is recommended that the whole blood sample be centrifuged and stored in cold storage. Serum and plasma samples can be stored at 2-8°C for 8 hours. Stored at  $-20^{\circ}$ C for 3 months. Avoid heating inactivated samples and hemolysis samples should be discarded.

#### Procedure

#### Follow the procedure exactly as described Procedural Notes

1. Before sample testing, read the instruction and applicable Instrument User Manual carefully. Before using refrigerated test cartridge, allow it to reach the operating temperature (18-28°C). Place the test cartridge on a level, horizontal surface.

Check the lot number of the test cartridge matches that of the CAL card.
 Insert the CAL card into the CAL card port of the instrument for tests.

4. Refrigerated serum or plasma specimens must be allowed to reach room temperature before testing. Frozen plasma or serum should be vortexed and centrifugated after thawing. The supernatant liquid should be obtained and reach room temperature before testing.

5. Pipette exactly  $80\mu$ L of sample into the sample port of the test cartridge. Start the timer, 15 minutes is needed for the reaction.

6. Insert the test cartridge into the applicable analyzer after reaction time is elapsed, select the accurate sample type and press 'STAT sample". The test cartridge can be detected automatically. The results will be displayed on the screen and printed when the analysis is completed.

7. After the assay is completed, remove the cartridge from the analyzer.

8. Dispose the used cartridge and pipette tips in accordance with any applicable regulations.

#### Calibration

Master curve calibration: Every HumaFIA SR reagent kit has a calibration card <u>CAL</u>, containing lot specific information for the calibration. After upload of calibration curve from the card, the calibration of this lot is stored at the instrument. All subsequent samples may be tested without further upload.

#### Calculation of results

The HumaFIA system automatically calculates the analyte concentration of each sample. The results are given in pg/mL.

#### **Quality Control**

For checking the correct functioning of the system, a suitable control material should be used, according to the legal requirements of the laboratory.

#### **Reference Value**

Reference value: < 300 pg/mL

It is recommended that each laboratory establish its own expected values for the population it serves.

#### Interpretation of Results

If the concentration in the sample exceeds the linear range, please dilute the sample with 5% BSA normal saline solution before testing, and report the result multiplied by dilution factor. The maximum dilution of the sample was 2 times.

The test results should not be used as the sole basis for diagnosis and should be combined with other clinical and laboratory data for clinical diagnosis. If the test results do not match the clinical assessment, further tests should be performed.

#### Limitations

Interference may be encountered with certain samples containing antibodies directed against reagent components. For this reason, assay results should be interpreted taking into consideration the patient's clinical history, and the results of any other tests performed.

When the sample contains high concentration of triglyceride, cholesterol, bilirubin or hemolysis, the test result will be affected. Do not use samples containing any of the following interfering substances for testing:

Severe lipemia: triglyceride concentration exceeds 15mg/mL;

High cholesterol: cholesterol concentration of more than 400mg/dL; Jaundice: the concentration of bilirubin exceeds 40mg/L;

Severe hemolysis: the concentration of hemoglobin exceeds 6mg/mL;

As with any assay employing mouse antibodies, the possibility exists for interference by human anti-mouse antibodies (HAMA) in the sample. The test has been formulated to minimize this interference; however, specimens from patients who have been routinely exposed to animals or to animal serum products may contain heterophile antibodies which may cause erroneous results.

#### Analytical Performance Characteristics

Appearance	The inner packaging is tightly sealed without leakage. The label content is complete, and the text is clear and easy to recognize. The surface of the test card should be smooth, without burrs, and uniform in color.
Film strip width	The width of the test strip in the display
F	window should be $\geq$ 3.7 mm.
Liquid migration speed	≥10 mm/min.
Samples that exceed the displayed range are marked as >higher or	
<lower measurement="" range<="" td="" than="" the=""></lower>	
Accuracy	Tested with accuracy reference material, the relative deviation between the average value of the test

	results and the marked value should be within ± 15%.
Within-run Precision	≤15 %
Between-run Precision:	≤15 %
Limit of detection	< 100 pg/mL
Linearity range	100-20000 pg/mL

#### Notes

- 1. All protocols for automated analyzers must be fully validated prior usage.
- 2. As with all diagnostic tests, the results should be interpreted with due consideration of other laboratory findings and of the clinical status of the patient.

#### Safety Notes

All patient specimens and controls should be handled as potentially infectious. All materials of animal origin avoid many risks associated with the use of human serum (e.g. Hepatitis B and C, HIV). Nevertheless, all material of human or animal origin should still be treated as potentially infectious material.

For users in the European Union only: Please report any serious incident that has occurred in relation to the device to the manufacturer and the competent authority of the Member State in which the user and/or the patient is established.

P234 Keep only in original container.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P262 Do not get in eyes, on skin, or on clothing.

P281 Use personal protective equipment as required.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention.

P401 Store in accordance with local/regional/national/international regulations.

P501 Dispose of contents/container in accordance with local/regional/ national/international regulations.



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