

Please use the reagent after reading this package insert

# TP Ab

## Quantitative turbidimetric latex assay for the measurement of TP Ab

### 【General attention】

1. This reagent is for in vitro diagnostic use, and do not use for other purpose.
2. The doctor in charge along with clinical conditions and other laboratory results, etc. must judge the clinical diagnosis based on the result of a measurement overall.
3. Please use it according to use and the dosage regimen described in the package insert. The reliability of the result of a measurement cannot be guaranteed when use excluding described use and dosage regimen.

### 【Reagent Composition】

1. Buffer (R1) ..... Liquid
2. Latex reagent (R2) ..... Liquid  
(Recombinant TP Antigen-sensitized latex)

### 【Intended use】

Measurement of anti-*Treponema Pallidum* (TP) antibody in serum or plasma.

### 【Principle】

1. Principle of measurement  
Recombinant TP antigen adsorbed on latex particles and anti-TP antibodies in the sample react immunologically, and causing the latex particles to agglutinate. This agglutination results in a change of turbidity, and the change in absorbance is a measure of the amount of anti-TP antibodies in the sample.
2. Feature
  1. Measurement principle is latex immuno turbidimetric assay.
  2. It is possible to adjust to various general-purpose automatic analyzers.
  3. unnecessary for preparation of reagent
  4. The preprocessing of the sample (dilution of the sample) is unnecessary.

### 【Handling Precautions】

1. Measurement sample  
Please use fresh serum or plasma samples.  
Please save the sample at 2-8°C after drawing blood, freeze thawing the sample rarely causes the false-positive.  
In addition, please use heparin or EDTA for the anticoagulant of the plasma specimen.
2. Interfering substance etc.  
The following components did not interfere with the test result: chyle (up to formazin turbidity 1550), bilirubin F ≤19.3 mg/dL, bilirubin C ≤19.9 mg/dL, hemoglobin ≤485 mg/dL, and RF ≤450 IU/mL.
3. Others
  - a. Storage reagents at (2-10°C), and the freezing preservation must be avoid
  - b. Please request material separately about the adaptation example to various automated analyzers.

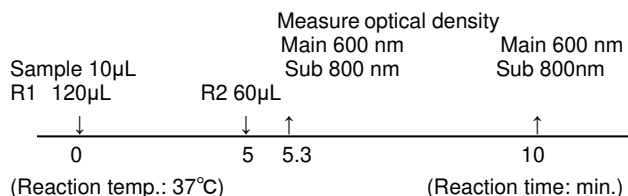
### 【Procedure】

1. Preparation of the reagents  
Buffer solution (R1) and Latex reagent (R2) are used as it is.
2. Stability  
The reagents will remain stable until the expiration date printed on the label, when stored tightly closed at 2-10°C and

contaminations are prevented during their use.

### 3. Procedure

[Standard procedure]



### 4. Calibration

Using optional TP Ab calibrator and measure them as sample based on the above-mentioned procedure, and made the calibration line.

### 【Judgment method of result】

#### (1) Normal reference values <sup>(3)</sup>

Negative	<10 U/mL
Intermediate	10 - 20 U/mL
Positive	>20 U/mL

The value used in this product is given in [U/mL] being determined in-house and is based on diluting the highest positive TP antibody control.

- (2) The nonspecific reaction can happen in various infectious diseases and autoimmune disease patients' serums. Please judge the diagnosis based on the result of a measurement overall in consideration of other inspections and clinical conditions.

### 【CLINICAL SIGNIFICANCE】

Immunological syphilis detection can be divided into a cardiolipin antigen method and pathogenic *Treponema Pallidum* (TP) antigen method. The TP antigen methods, to name TPHA method and FTA-ABS method, are recognized as superior methods regarding specificity and sensitivity. However, these methods are rather complicated; show a lack of speed and some kind of subjectivity is involved. This product consists of recombinant TP antigen-coated latex, being used in a turbidimetric immunoassay. Syphilis serum antibodies in serum are quantitatively determined by optical means (turbidity); specificity and sensitivity of the reagents is high with objective tests results. In addition, reagents can be adapted to various automatic analyzers.

### 【PERFORMANCE】

#### 1. ANALYTICAL PERFORMANCE

1. Sensitivity
  - (a) When measured saline liquid as the sample, absorbance change ( $\Delta$ OD) is below 0.002/min.
  - (b) When measure known concentration sample, absorbance change of TP Ab concentration 125U /mL is between 0.01 to 0.08/min.
2. Accuracy  
When measured the control serum of known concentration is measured, measurement value is within  $\pm$ 20% of the known value.
3. Reproducibility  
When measure the same sample five times at the same time, the C.V of the absorbance value is 10% or less.

#### 4. Measurement range

Measurement range of the TP Ab in the sample is 5 to 500U/mL.

#### 5. Standard material

Measurement results of the WHO standard of (1st IS for human syphilitic plasma IgG and IgM: NIBSC code 05/132) with this kit was 1 U = 1.08 IU.

Measurement results of the WHO standard of (1st IS for human syphilitic plasma IgG: NIBSC code 05/122) with this kit was 1 U = 0.16 IU.

### 2. Correlation

- (1) Comparing this kit (y) with a commercially available LIA method (x) resulted in a good correlation:  $n=88$ ,  $y=0.9348x + 4.999$ , and  $r=0.8710$ .
- (2) Comparing this kit (y) with a commercially available TPHA method (x) resulted in a good correlation:  $n=78$ ,  $y=0.2729x + 3.710$ , and  $r=0.9585$ .
- (3) Comparing serum, plasma sample of the same patient, resulted in following correlation.  
Serum (x), Heparin lithium plasma (y):  $n=51$ ,  $y=1.0788x + 0.6945$ , and  $r=0.9983$ .  
Serum (x), EDTA plasma (y):  $n=51$ ,  $y=1.0972x - 1.5462$ , and  $r=0.9990$ .

### [Attention in handling for use]

#### 1. Attention in handling (dangerous prevention)

- (1) An infectious microorganism such as hepatitis B viruses might exist in the sample, please handle it assuming that there is a risk for infection.
- (2) Sodium azide of 0.09 w/v% is contained in the reagents as preservative. When entering eyes and mouths or adhering to the skin by mistake, flushing enough them with water as a stop-gap measure. If there is a necessity receive the doctor's treatment.

#### 2. Directions

- (1) Do not use the reagents after the expiration date.
- (2) After open the reagents, use them as early as possible. When preserve them, please close the lid and preserve on a specified condition.
- (3) Please do not use the bottle and the accessory in this kit for other purposes.
- (4) Please set the buffer and the latex reagent at the position correctly after gently mixing by invert the bottle before measure. Please remove the bubble when bubbling.
- (5) When the measurement value exceeds the measure range, please dilute with saline liquid at least a factor 5 with saline solution, and measure the specimen material. Those obtained by multiplying the dilution factor in value is the measured value.
- (6) Please do not use the reagent with different lot.
- (7) Please make the working curve at each measurement. Moreover, please measure the calibration sample for two times or more respectively.
- (8) Please use the calibrator sold separately, and refers to the manual of the goods before use.
- (9) Preserve the reagent at refrigerated condition (2-10°C) and avoid the freezing.

#### 3. Attention for Disposal

- (1) Sodium azide of 0.09 w/v % is contained in the reagents as preservative. The sodium azide might generate the metallic azide that it reacts with the lead pipe and the copper pipe and explosiveness is strong, and flush it in volumes of water, please when you abandon it.
- (2) An infectious microorganism such as hepatitis B viruses might exist in the sample, and process a used sample, the reagent container, and apparatus, etc. by sterilization, disinfection (0.5% solution of sodium hypochlorite), and incineration, etc.
- (3) Please process it according to regulations of Wastes Disposal and Public Cleaning Law and Water Pollution Control Law, etc. when you abandon and apparatus, etc.

### [Storage and validity period]

1. Storage : 2~10°C
2. Validity period : 1 year after production  
Expiration date is displayed on the outer box and bottle labels.

### [Package]

Product Name	Contents
TP Ab reagent	
Buffer (R1)	40mL ×1
Latex reagent (R2)	20mL ×1

### [Optional goods]

(Product Name) (Contents)

- TP Ab Calibrator      6 conc. x 1mL each  
TP Ab Control      Positive and Negative ×2mL each

The indicated value is displayed on the label

### [References]

- 1) Fujimura K, Ise N, Ueno E, et al. : J Clin Lab Anal.,11, 315-322,1997.
- 2) Gerber A, Krell S, Morenz J: Immunobiology, 196, 535-549, 1996.
- 3) Matsuo Deguchi: KensatoGijyutu, 27: (3) 264 - 266.
- 4) Internal documents by manufacturer and distributor.

### [Inquiries]

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### [Manufacturing and distribution]

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