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(FOR RESEARCH USE ONLY. DO NOT USE IT IN CLINICAL DIAGNOSIS!)

Total Bilirubin (TBIL) Assay Kit

Catalog No.: BC00064

Size: 100T

If you have any questions or need further help during experiment, please don't hesitate to contact us through the following methods:

✉Email (Sale) order@enkilife.com

✉Email (Techsupport) techsupport@enkilife.com

Tel: 0086-27-87002838

Website: www.enkilife.com

Shelf life: Please refer to the label on the outer package.

Techsupport: In order to provide you with better service, please inform us the lot number on the label of the outer package.

Basic Information

Product Name	Total Bilirubin (TBIL) Assay Kit
Detection Methods	Colorimetric
Sample type	Serum, plasma
Detection Type	Quantitative
Detection instrument and wavelength	Microplate reader (570-590 nm , optimal detection wavelength is 570 nm)
Range	12.5-100μM
Sensitivity	1μM

Product Introduction

Total Bilirubin (TBIL) is the sum of bilirubin in the blood, including unconjugated bilirubin (indirect bilirubin) and conjugated bilirubin (direct bilirubin). Bilirubin is a yellow substance produced after the aging and decomposition of red blood cells. It is metabolized in the liver and then excreted from the body in the form of bile. The determination of total bilirubin level is an important indicator for evaluating liver function, biliary system, and red blood cell production and destruction .

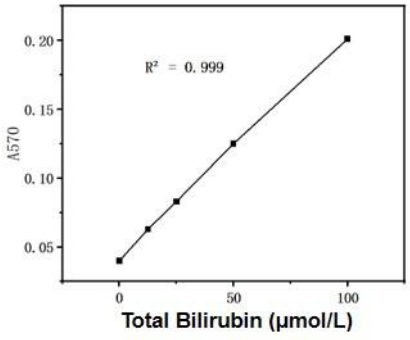
Features

★ Easy to operate, the test can be completed within 5 minutes .

Detection Principle

Direct bilirubin in serum can react directly with the diazo reagent to generate azo bilirubin in an acidic environment. Under the action of the accelerator, the intramolecular hydrogen bond of unconjugated bilirubin is destroyed and it reacts with the diazo reagent to generate azo bilirubin. The absorbance of the complex obtained by this reaction at 570 nm is proportional to the total bilirubin concentration in the sample.

Total bilirubin determined by this kit. The following standard curve is for reference only:



Product composition

Serial Number	Product Name	Packing Specifications	Storage
Reagent 1	R1	30mL	Store at -20℃ away from light , store
Reagent 2	R2	15mL	Store at -20℃ away from light , store
Reagent 3	R3	3mL	Store at -20℃ , store at 2-8 ℃ after
	96-well ELISA plate	1 plate	RT
	96-well membrane	2 pieces	RT

Storage conditions

The unopened kit can be stored at -20°C for 6 months.

Preparation before the experiment

Sample processing

Serum and plasma should be separated promptly after blood collection to avoid hemolysis and light exposure. Samples should be measured as soon as possible.

· Preparation of the kit

1. Before testing, the reagents in the kit were equilibrated to room temperature.
2. Dilution of different concentrations of standard: dilute reagent 3 with DMSO in half to different concentrations such as 100, 50, 25, 12.5, 0 (blank well) μmol/L
3. Preparation of working solution: Mix reagent 2 and reagent 3 in a volume ratio of 10:1 to make working solution. It is best to use it immediately after preparation and store it away from light.

Operation process

1. Standard wells: Take 10 μL of standard solutions of different concentrations and add them to the corresponding standard wells.
2. Sample well: Take 10 μL of sample and add it to the corresponding sample well.
3. Add 250 μL of reagent 1 to the standard wells and sample wells in step “ 1 ” .
4. to the standard wells and sample wells in step “ 2 ” .
5. Oscillate on a microplate reader for 5 s and measure the OD value of each well at 570 nm.

Operation table

	Standard wells	Assay wells
Standard solutions of different	10	--
Sample to be tested (μL)	--	10
R1(μL)	250	250
Working solution (μL)	50	50
Oscillate on the microplate reader for 5 s and measure the OD value of		

Result calculation

Standard fitting curve: y = ax + b

Normal serum (plasma) sample, direct bilirubin concentration calculation formula:

Concentration (mmol/L) = (ΔA570 - b) ÷ a × f

annotation:

y: OD value of standard well - OD value of blank well (OD value when the concentration of standard is 0)

x: concentration corresponding to the absorbance

a: slope of the curve

b: intercept of the curve

ΔA570: Sample OD value - blank OD value (OD value when the standard concentration is 0)

f: dilution factor of the sample before adding it to the detection system

Notes

1. The optimal detection wavelength of the ELISA instrument is 570 nm, and detection can be performed in the range of 570 nm-590 nm.
2. This product is limited to scientific research by professionals and must not be used for clinical diagnosis or treatment, used as food or medicine, or stored in ordinary residences.