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Activated Partial Thromboplastin Time（APTT）Assay Kit

Note: Take two or three different samples for prediction before test.

Operation Method: Coagulation method

Cat No: AK1027

Size: 50T/48S ; 100T/96S

Product Composition: Before use, please carefully check whether the volume of the reagent is consistent with the volume in the bottle. If you have any questions, please contact SunLong staff in time.

Solution Preparation:

1. Reagent II: Prolonged storage may cause yellow-green sediment; just shake well before use.

Product Description:

Activated Partial Thromboplastin Time (APTT) refers to the time required for plasma coagulation after ellagic acid, phospholipids, and Ca2+ are added to platelet-poor plasma. In this process, ellagic acid activates coagulation factors, phospholipids replace platelet function, and the phospholipid surface exposed after platelet activation is simulated. APTT reflects the functional status of endogenous coagulation pathway factors (XII, VIII, IX, XI.) and common pathway factors, and is commonly used for hemophilia screening, heparin anticoagulation monitoring, lupus anticoagulant auxiliary diagnosis, and preoperative risk assessment.

After ellagic acid and phospholipids are added to plasma, ellagic acid activator factor XII and endogenous coagulation cascade are sequentially initiated. Activated factor X, with the involvement of Ca^{2+} and phospholipids, forms a prothrombinase complex with factor Va, catalyzing the conversion of prothrombin into thrombin, ultimately causing fibrinogen to coagulate into a gel-like clot.

Reagents and Equipment Required but Not Provided:

Centrifuge, timer, water-bath, adjustable pipette, 5mL/10mL round-bottom plastic test tubes/round- bottom centrifuge tubes, sodium citrate anticoagulant blood collection tube (optional).

Operation procedure:

I. Plasma preparation

Take fresh venous blood to be tested and normal fresh venous blood, mix them with Reagent 1 at a 9:1 ratio (sodium citrate collection tube can also be used, but no additional Reagent 1 is needed), gently shake

Reagent name

50T Size

100T Size

Storage

Reagent I

Liquid 60 mL×1

Liquid 110 mL×1

RT

Reagent II

Liquid 5 mL×1

Liquid 10 mL×1

2-8℃

Reagent III
Liquid 5 mL×1
Liquid 10 mL×1
2-8℃
well, fully anticoagulate, then centrifuge at room temperature at 3000 rpm for 15 minutes. Take the upper plasma into a centrifuge tube and store at room temperature for 4 hours. If detection cannot be done promptly, aliquot and store at -20°C for 2 weeks to avoid repeated freeze-thaw cycles.
Note:(1) Plasma preparation can be done using sodium citrate blood collection tubes. In this case, no additional Reagent One is required; EDTA, heparin, oxalates, and other anticoagulants must not be used.
Reagent (μ
(2) Hemolysis, hyperlipidemia, and the use of estrogen, contraceptives, phenytoin, warfarine, naloxone, and other drugs can affect APTT test results.
(3) After plasma preparation, it is recommended to measure it as soon as possible. It can be stored at room temperature for 4 hours, at 4°C for 12 hours, and at -20°C for 2 weeks by portioning and storing for 2 weeks to avoid repeated freeze-thaw cycles.
II. Determination procedure:
1.
Preheat some reagents according to the number of samples, preheat Reagent II at 37°C for 3 minutes, and Reagent III at 37°C for more than 5 minutes.
2.
Add samples to the round-bottom plastic test tube/round-bottom centrifuge tube following the steps in the table:
L)
Test tube
Plasma to be measured/normal plasma
100
Reagent II
100
Mix well, incubate at 37°C for 5 minutes, gently mixing 2-3 times during this period. (During experiments, you can first add Reagent II to a round-bottom plastic test tube/centrifuge tube, preheat for 3 minutes, then add plasma and mix well, then incubate at 37°C and follow up with subsequent operations.)
Reagent III
100
Start timing as you add Reagent III, gently tilt the tube/centrifuge tube (do not shake vigorously), observe the liquid condition, and record the gel formation time. Each batch requires measuring normal plasma 1-2 times as a control.
Note:
1.
Normal plasma must be prepared as a control for plasma testing; normal plasma only needs to be measured 1-2 times per batch.

2.

Differences in reagent batches, sample processing and storage, instruments, and experimental operations can lead to differences in test values, so it is recommended that laboratories establish their own reference ranges.

Experimental example：

1.

Rabbit plasma was taken and performed according to the measurement procedure, with an APTT of 25 seconds.