Glycated serum protein (GSP) assay kit

(Cat/No.:BC150 Size:96T)

1. Determination principle

undergo a non-enzymatic glycation reaction with the N- terminal amino group of albumin and other serum protein molecules to form a high molecular weight ketoamine structure. This ketoamine structure can undergo a reduction reaction with nitrotetrazolium blue NBT in an alkaline environment to generate formazan, and perform a colorimetric reaction using fructosamine DMF as a standard reference.

2. Composition and preparation: (The kit is valid for 3 months)

	Group share	96T	Save live
Reagent 1	2mmol/ L DMF standard solution	0.2mL × 1 bottle	at -20 ℃ for 3 months
Reagent 2	BSA	0.2mL × 1 bottle	at -20 ℃ for 3 months
Reagent 3	NBT color developer	30mL× 1 bottle	4 ℃ away from light for 3 months
Reagent 4	Stabilizer	1.5mL×1 bottle	Store at room temperature for 6 months
	If it solidifies, please heat it in a water bath until it becomes transparent before use.		

3. Detection of GSP in serum

	Blank Well	Standard blank well	Standard wll	Determination well
Double distilled water (μL)	10			
2mmol/ L DMF standard solution (μL)			10	
Bovine serum albumin (μL)		10		
Serum (plasma) (μL)				10
NBT colorimetric reagent (pre-warmed at 37 °C) (μL)	200	200	200	200
Shake gently and incubate in 37 ℃ water bath for 15 minutes				
Stabilizer (μL)	10	10	10	10

Shake gently and compare color using an enzyme reader at 530nm .

4. Calculation formula

$$GSP\ content(mmol/L) = \frac{OD_{measurement} - OD_{blank}}{OD_{standard} - OD_{blank}} \times Standard\ concentration\ (2\ mmol/L)$$

[Note] : 1mmol / L = 1mmol/L × molecular weight (249) ÷ 1000 = 0.249g / L

5. Calculation example

Take 0.01 mL of serum and operate according to the above table. The OD value of the blank well is 0.0387 , the absorbance value of the measurement well is 0.2163 , the absorbance value of the standard well is **0.3003** , and the **absorbance** of the standard blank well is 0.1343 .

$$GSP\ content(mmol/L) = \frac{0.2163 - 0.0387}{0.3003 - 0.1343} \times 2mmol/L = 2.1398mmol/L$$

6. Disclaimer

Please read the instructions carefully before testing , and conduct batch experiments after preliminary testing , otherwise the consequences will be borne by the user !