

FUJIFILM

Wako

Code No. 033-11223 (500 units)
037-11221 (1000 units)

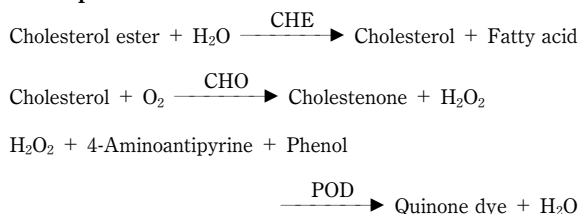
Cholesterol Esterase

コレステロールエステラーゼ

Source : *Pseudomonas* sp.
Appearance : Lyophilized powder
Activity : Indicated on the label
Optimal pH : 7.0
Optimal temperature : 37°C

Assay method

1. Principle



2. Reagents

- 0.15 mol/L Phosphate buffer, pH 7.0
- Dissolve 2.04 g of Potassium dihydrogen phosphate with 70 mL of water, add 75 mg of Sodium azide, 30 mg of 4-Aminoantipyrine and 100 mg of Phenol, and then adjust to pH 7.0 $\pm$ 0.1. Add 5 mg of Peroxidase from horseradish and 50 units of Cholesterol oxidase in this solution, and finally add water to bring the volume up to 100 mL.
- Cholesteryl Linoleate 20 mg/50 mL (contains detergents)
- Cholesterol Esterase solution
Adjust Cholesterol Esterase with Reagent A to 0.005 to 0.008 mg/mL, $\Delta A/\text{min} = 0.020 \pm 0.005$.

Trans *

試薬

- 0.15 mol/L リン酸緩衝剤, pH 7.0
- リン酸二水素カリウム 2.04 g に水 70 mL を加え, 更にアジ化ナトリウム 75 mg, 4-アミノアンチピリン 30 mg, フェノール 100 mg を加えた後, 1 mol/L 水酸化カリウム溶液で pH 7.0 $\pm$ 0.1 に調整する. この液にパーオキシダーゼ, ワサビ由来 5 mg 及びコレステロールオキシダーゼ 50 units を加えた後, 水で 100 mL とする (pH 7.0).
- リノール酸コレステロール 20 mg/50 mL (界面活性剤を含む).
- CHE 液 (0.005~0.008 mg/mL, $\Delta A/\text{min} = 0.020 \pm 0.005$ になるように試薬 A で調整する)

3. Procedure

Reagent	Test	Blank
C	1 mL	1 mL
B	2 mL	2 mL
Pre-incubate at 37°C for 5min 37°C, 5 分間予備加温		
D	0.1 mL	—
A	—	0.1 mL
Measure the absorbance change at 500 nm of wavelength at 37°C after 3 and 6 min, record the change as ΔA_3 test, ΔA_6 test, ΔA_3 control, ΔA_6 control.		
Trans *		
37°C, 3 分および 6 分後の 500 nm における吸光度変化を測定し, それぞれ ΔA_3 test, ΔA_6 test, ΔA_3 control, ΔA_6 control とする.		

4. Unit Definition

One unit is the amount of enzyme, which will produce 1 μmol of cholesterol per minute under the above conditions.

(Calculation)

$$\begin{aligned} \text{units/mg} &= \Delta A/\text{min} \times \frac{1}{6.8} \times 3.1 \times \frac{1}{0.1} \times \frac{1}{D} \\ \Delta A/\text{min} &= [(\Delta A_6 \text{ test} - \Delta A_3 \text{ test}) \\ &\quad - (\Delta A_6 \text{ control} - \Delta A_3 \text{ control})] \times \frac{1}{3} \end{aligned}$$

6.8 : Milli-molar extinction coefficient of quinone dye

D : The concentration of the used cholesterol esterase solution (mg/mL)

[Trans]*

単位の定義

前記条件下で1分間に1 μ mol のコレステロールを生成する
酵素量を1 unit とする.

(計 算)

$$\text{units/mg} = \Delta A/\text{min} \times \frac{1}{6.8} \times 3.1 \times \frac{1}{0.1} \times \frac{1}{D}$$

$$\Delta A/\text{min} = [(\Delta A_6 \text{ test} - \Delta A_3 \text{ test}) \\ - (\Delta A_6 \text{ control} - \Delta A_3 \text{ control})] \times \frac{1}{3}$$

6.8 : キノン色素のミリモル吸光係数

D : CHE 液濃度 (mg/mL)

[Storage] Store at -20°C

[Package]

Code No.	Packaging
033-11223	500 units
037-11221	1000 units

* : [Trans] is the Japanese translation.

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