

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

Diamine Oxidase (DAO) Activity Assay Kit

Catalog No.: BC00160

Size: 100T

Please read the instructions carefully before use. 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.

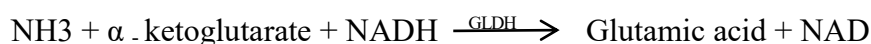
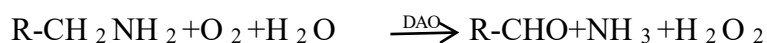
Basic Information

Product Name	Diamine Oxidase (DAO) Activity Assay Kit
Detection Method	Colorimetric
Sample Type	Fresh serum
Assay Type	Quantitative
Detection Instrument	Microplate reader (optimal detection wavelength 340 nm)

Product Introduction

Diamine oxidase (DAO) is a copper-containing amine oxidase widely distributed in tissues such as the intestinal mucosa, placenta, kidneys, and thymus. DAO catalyzes the oxidative deamination of diamine substrates such as histamine, putrescine, and cadaverine, producing the corresponding aldehydes, ammonia, and hydrogen peroxide. When tissue cells are damaged or cell membrane permeability is altered, DAO is released into the bloodstream, leading to increased serum DAO activity. However, under specific physiological or pathological conditions (such as placental insufficiency), serum DAO activity may abnormally decrease. This reagent is used to measure serum DAO activity, primarily for monitoring placental function in pregnant women: DAO levels gradually increase before labor; a sudden decrease is a sign of miscarriage, prompting preventative measures. Literature reports elevated serum DAO levels in gastrointestinal diseases and enteritis, as well as in colon cancer and ascites.

Principle



The NADH decrease rate per minute ($-\Delta A/\text{min}$) was measured at a wavelength of 340 nm, and its activity was calculated.

Components

Component	Name	Size	Storage
Reagent	Tris-HCl pH 7.4	20 mL × 1 bottle	2~8°C, away from light
	NADH 0.25mmol/L		
	GLDH >3000U/L		
	1,4-Butanediarnine ≥12 mmol/L		
Consumables 1	Microplate (96 wells)	1 plate	RT
Consumables 2	Plate Sealer	2 pieces	RT

Storage

The kit has a shelf life of 3 months.

Operation process

Reagents(μL)	Blank tube	Test tube
Double-distilled water	20	--
Serum	--	20
Working solution	200	200
Immediately after mixing the sample with the working solution, start timing. Gently shake the plate and read the OD value (A1) at 340 nm after 30 seconds using a microplate reader. Remove the plate and incubate at 37°C. Read the OD value again (A2) after 10 minutes and 30 seconds. Calculate $\Delta A = A1 - A2$. (Note: Do not add air bubbles when adding reagents or samples to the 96-well plate.)		

Result calculation

$$\text{DAO activity (U/L)} = \frac{(A_{\text{test}} - A_{\text{blank}}) \times 10^3}{6.22 \times \text{Colorimetric path (0.643cm)} \times \text{Reaction time (10min)}} \times \frac{\text{Total reaction volume (220}\mu\text{L)}}{\text{Volume of liquid taken (20}\mu\text{L)}}$$

Annotation

10^3 : The factor for converting mmol/L to $\mu\text{mol/L}$;

6.22 : The millimolecular extinction coefficient of NADH at 340 nm.

Precautions

1. Technical specifications: Blank absorbance A at 340nm >0.5, batch-to-batch precision<10%, linear range 0–100 U/L;
2. This product is for research use only and must not be used for clinical diagnosis. Do not take it.