G R

Glutathione reductase (NAD(P)H)

NAD(P)H : oxidized-glutathione oxidoreductase (EC 1.6.4.2)

from Yeast

Reaction Equation

NADPH + Oxidized glutathione
= $NADP^+$ + 2 Glutathione

Specification

Specific Activity	Specifications
IU/mg protein	＞120 units
Contaminants	
NADPH oxidase	＜0.01%
Phosphogluconate dehydrogenase	＜0.01%
Glucose-6-phosphate dehydrogenase	＜0.1%

Assay Procedure

Ⅰ. Spectrophotometric Method

Wavelength ; 340 nm, Light path length ; 1 cm,
Temperature ; 25℃

Pipette the following reagents into a cuvette

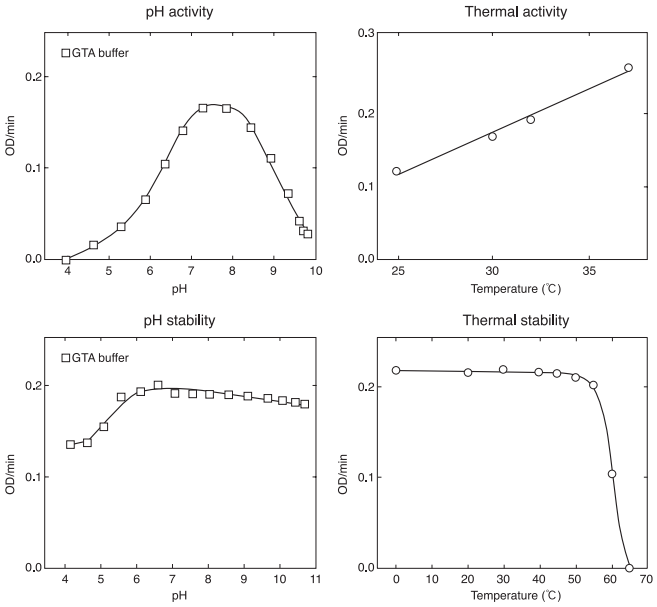
2.75 mL	Triethanolamine-HCl-NaOH buffer (0.1 mol/L, pH 7.5) containing EDTA·2Na (1 mmol/L)
0.15 mL	GSSG (0.1 mol/L)
0.05 mL	NADPH (10 mmol/L) dissoluted in Tris (10 mmol/L)
0.02mL	GR (about 3 IU/mL)

Ⅱ. Calculation

$$\frac{\Delta A/\text{min}\cdot V\cdot D}{6.2\cdot d\cdot v}=\text{IU/mL}$$

ΔA/min = The change in absorbance at 340 nm/minute
V = Total volume of reaction mixture (2.97 mL)
D = Enzyme dilution factor
6.2 = mM extinction coefficient of NADPH
($L\cdot mmol^{-1}\cdot cm^{-1}$)
d = Light path length (1 cm)
v = Volume of enzyme sample (0.02 mL)

Reference Data



Preparation and storage

Product Code : GR-05
50% Glycerol solution…… −25℃～−15℃
IU per 1 ml solution is approximately 1,000 units.

OYC No./Package

OYC No.	Package
46540005	200 units
46541005	1,000 units
46542005	4,000 units
46541905	Bulk

(Research reagent use only, not for medical use.)