

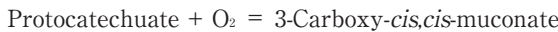
# r P C O

## Protocatechuate 3,4-Dioxygenase, recombinant from bacteria

Protocatechuate : oxygen 3,4-oxidoreductase (deacylizing) (EC 1.13.11.3)

*Host cell : E. coli*

### Reaction Equation



### Specification

#### Specific Activity

IU/mg protein

#### Specifications

>3 units

#### Contaminants

NADPH oxidase  
Alkaline phosphatase

<0.01%

<0.002%

### Profile

pH stability : pH 5.0 - 10.5 (11°C, 1 week)

Thermal stability :  $\leq 60^\circ\text{C}$  (pH 8.0, 15 min)

Optimum pH : 9.0

Optimum temperature :  $65^\circ\text{C}$

K<sub>m</sub> value : 28  $\mu\text{mol/L}$  (Protocatechuate)

MW : 28 kD  $\alpha$  subunit, 24 kD  $\beta$  subunit (SDS-PAGE)

### Assay Procedure

#### I. Spectrophotometric Method

Wavelength ; 290 nm, Light path length ; 1 cm,

Temperature ;  $37^\circ\text{C}$

Pipette the following reagents into a cuvette

3.00 mL Tris-acetate buffer (50 mmol/L, pH 7.2,  $37^\circ\text{C}$ )  
containing Protocatechuate (0.4 mmol/L)

0.02 mL rPCO (1.2~1.6 IU/mL)

#### II. Calculation

$$\frac{\Delta A/\text{min} \cdot V \cdot D}{3.8 \cdot d \cdot v} = \text{IU/mL}$$

$\Delta A/\text{min}$  = The change in absorbance at 290 nm/minute

V = Total volume of reaction mixture (3.02 mL)

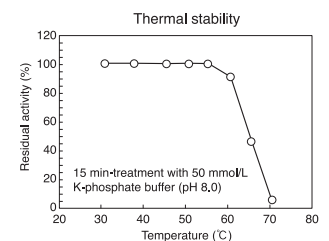
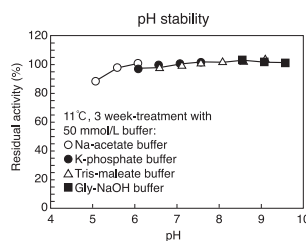
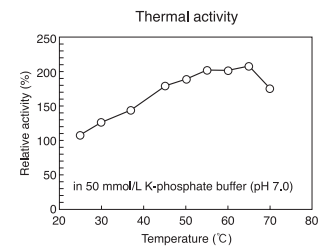
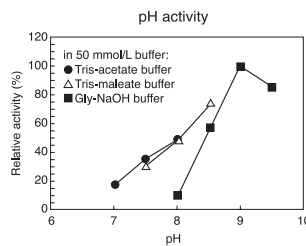
D = Enzyme dilution factor

3.8 = mM extinction coefficient of Protocatechuate  
( $\text{L} \cdot \text{mmol}^{-1} \cdot \text{cm}^{-1}$ )

d = Light path length (1 cm)

v = Volume of enzyme sample (0.02 mL)

### Reference Data



### Preparation and storage

Product Code : rPCO-04

Solution..... $1^\circ\text{C} \sim 10^\circ\text{C}$

IU per 1 ml solution is >80 units.

### OYC No./Package

| OYC No.  | Package   |
|----------|-----------|
| 46852004 | 300 units |
| 46852904 | Bulk      |

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



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