

Oxalate Decarboxylase (OxdC), Active Bacterial Recombinant

CATALOG #: 7262-20 20 µg
 7262-100 100 µg
 7262-1000 1000 µg

ALTERNATE NAMES: Oxalate carboxyl-lyase, Yvrk, OxdC

SOURCE: *Bacillus subtilis (strain 168)*

SEQUENCE: Amino acid residue 1-385 with N-terminal His-tag

PURITY: ≥ 98% by SDS - PAGE

MOL. WEIGHT: 45.9 kDa

FORM: Liquid

FORMULATION: 2 mg/ml solution in 20 mM Tris, pH 8 containing 20% Glycerol.

STORAGE CONDITIONS: Stable for 1 year at -20 °C. For long term storage, aliquot and store at -70 °C. Avoid repeated freezing and thawing cycles.

DESCRIPTION: Oxalate decarboxylase (OxdC, EC4.1.1.2) is a manganese-containing enzyme, which decomposes oxalic acid and oxalate. With OxdC catalysis, oxalate is split into formate and CO₂. This enzyme belongs to the family of lyases, specifically the oxalate carboxyl-lyase (formate-forming). OxdC is composed of two cupin domains, and each domain contains a Mn(II) ion. OxdC participates in glyoxylate and dicarboxylate metabolism, and has been recognized for diagnostics in diverse biotechnological applications such as clinical assays detecting oxalate in blood and urine, as well as lower oxalate levels in therapeutical process, industrial and agricultural applications.

ENZYMATIC ACTIVITY: Specific activity with 100 mM oxalate is approximately 2 U/mg. The specific activity is calculated using Oxalate Decarboxylase Activity Assay Kit (Colorimetric) (BioVision Cat. No. K664-100)

DEFINITION: One unit of Oxalate Decarboxylase is the amount of enzyme that generates 1.0 µmol of formate per min. at pH 5 at 37 °C. Specific activity was expressed as U/mg protein.

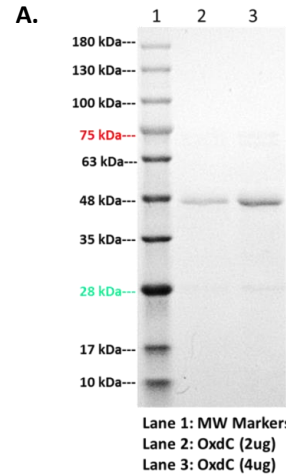


Figure A. SDS-PAGE (4-20%) of Recombinant OxdC: Recombinant OxdC protein was loaded under reducing conditions and stained with Coomassie Blue. The protein showed a band at ~46 kDa.

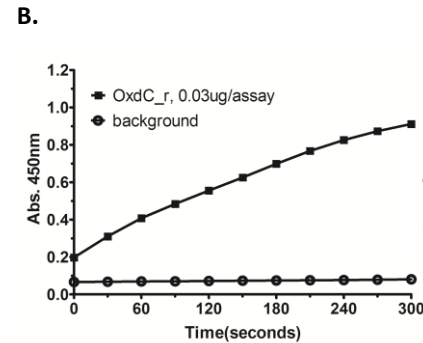


Figure B. Enzymatic Activity of OxdC: The enzymatic activity was calculated using Oxalate Decarboxylase Activity Assay Kit (Colorimetric) (BioVision Cat. No. K664-100).

RELATED PRODUCTS:

- Oxalate decarboxylase activity colorimetric assay kit (**Cat. No. K664-100**)
- Oxalate (oxalic acid) colorimetric assay kit (**Cat. No. K663-100**)

FOR RESEARCH USE ONLY! Not to be used in humans.

