# *B. subtilis* Recombinant, Oxalate oxidase (OxOx)

**CATALOG NO:** P1091-20 20 µg
P1091-100 100 µg

**ALTERNATE NAMES:** OxO, OxOx, OxO_r

**SOURCE:** *E. coli*

**SEQUENCE** Refer to *B. subtilis* oxalate decarboxylase. Oxalate oxidase is derived from oxalate decarboxylase by introducing three mutations: S161D, E162A, and N163S

**PURITY:** ≥90% by SDS-PAGE

**MOL. WEIGHT:** 43.6 kDa, His-tagged

**FORM:** Freeze-dried from proprietary buffer

**STORAGE:** Store at -20°C. Stable for at least 2 years as supplied.

**RECONSTITUTION:** Reconstitute to 2 mg/mL in sterile water, store at -80°C in aliquots and use within 6 months after reconstitution. Avoid repeated freeze-thaw cycles.

**DESCRIPTION:** Oxalate oxidase is a member of the cupin superfamily. It catalyzes the breakdown of oxalate to hydrogen peroxide and carbon dioxide. Oxalate oxidase and oxalate decarboxylase are two similar enzymes that share similar structural and sequence identity. Both enzymes use oxalate as substrate and manganese ions as cofactors. BioVision's oxalate oxidase is derived from *B. subtilis* oxalate decarboxylase by introducing three mutations: S161D, E162A and N163S in the active-site loop.

**SPECIFIC ACTIVITY:** The enzyme has a specific activity of ≥ 230 mU/mg based on measuring the production of $H_2O_2$ from the following reaction:

$$\mathbf{(COOH)_2\ (Oxalate) + O_2 \longrightarrow 2CO_2 + H_2O_2}$$

**UNIT DEFINITION:** One unit is the amount of enzyme that converts 1 µmole of oxalate to $CO_2$ and $H_2O_2$ per minute at pH 4.5 and 25°C.

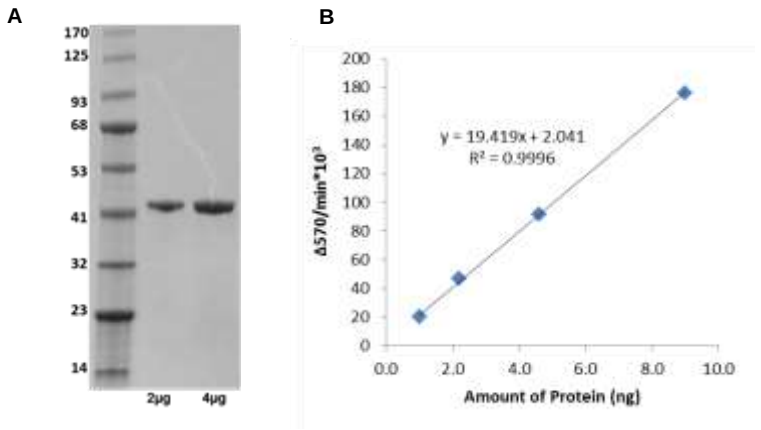


**Fig. A. SDS-PAGE (4-20%) of Recombinant OxOx:** Recombinant Protein loaded under reducing conditions and stained with Coomassie Blue. The protein shows a predicted MW of ~ 43.6 kDa

**Fig. B. OxOx activity assay:** Specific activity of oxalate oxidase is ≥230 mU/m. Different amount of enzyme reacted with 1.36 mM of oxalate yield the different rates. The specific activity is calculated by the decrease in absorbance at 570 nm after 10 min incubation at 25℃

## RELATED PRODUCT:

- Oxalate Decarboxylase, Active Bacterial Recombinant **(Cat. No. 7262-20, -100, -1000)**
- 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 on humans.***