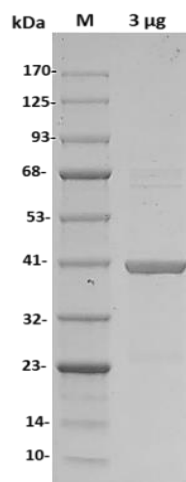
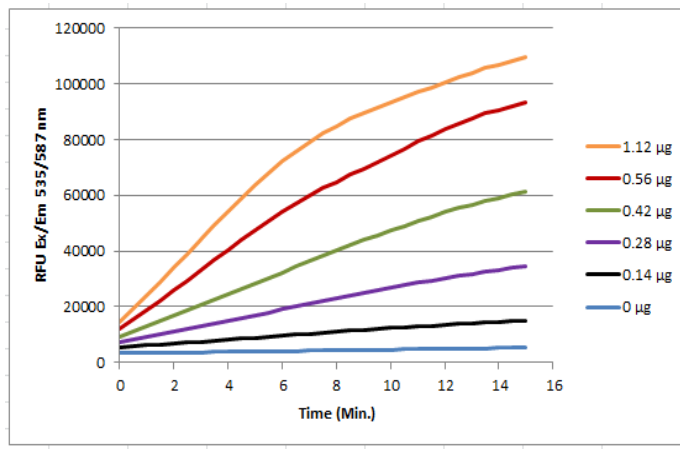


# Hydroxyacid Oxidase-1/HAO-1, Human Recombinant

|                             |  |                |
|-----------------------------|--|----------------|
| <b>CATALOG NO:</b>          | P1474-10<br>P1474-50   | 10 µg<br>50 µg |
| <b>ALTERNATE NAMES:</b>     | HAOX1, Glycolate Oxidase, GOX, HAO1, GOX1  |                |
| <b>MOL. WT.</b>             | 43 kDa (N-His Tag)   |                |
| <b>SOURCE:</b>              | <i>E coli</i>  |                |
| <b>PURITY:</b>              | >95% SDS-PAGE  |                |
| <b>FORM:</b>                | Liquid   |                |
| <b>FORMULATION:</b>         | Supplied as 0.2 µm filtered solution in 20 mM Tris Buffer, pH 7.5, 500 mM NaCl and 35% Glycerol  |                |
| <b>SPECIFIC ACTIVITY:</b>   | >20 mU/mg. Specific activity was measured by its ability to oxidize glyoxylate.  |                |
| <b>UNIT DEFINITION:</b>     | One unit of HAO activity is the amount of enzyme that generates 1.0 µmol of H <sub>2</sub> O <sub>2</sub> per minute at pH 7.5 at 25°C.  |                |
| <b>STORAGE CONDITIONS:</b>  | Store enzyme solution at -20°C. Aliquots of the enzyme can be stored at 4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C.  |                |
| <b>DESCRIPTION:</b>         | Glycolate oxidase is a member of the superfamily of the α-hydroxy acid oxidases (HAO), enzymes that are present in both plants and animals. It catalyzes the FMN-mediated oxidation of glycolate to glyoxylate and glyoxylate to oxalate with reduction of oxygen to hydrogen peroxide. The co-factor, FMN, is tightly bound but not covalently linked to the protein. In humans and other vertebrates, HAOs are found primarily in the peroxisomes of liver, kidney, and pancreas. Three HAOs have been identified in humans. HAO-1 is most highly expressed in liver and pancreas and is most active on glycolate, two-carbon substrates. Glycolate oxidase oxidizes glycolic acid to glyoxylate, and can also oxidize glyoxylate into oxalate. These reactions are central to the toxicity of ethylene glycol poisoning. Recently, HAO has been identified as a major contributor to hyperoxaluria, a disorder in which large deposits of calcium oxalate form kidney stones. |                |
| <b>AMINO ACID SEQUENCE:</b> | aa 1-370   |                |



**SDS-PAGE of HAO-1:** Recombinant HAO-1 (3 µg) was loaded on the SDS-PAGE (4-20%) under reducing conditions and stained with Coomassie Blue. Lane M: MW Marker



**Enzymatic activity assay:** Specific activity of HAO was determined by using BioVision's Hydroxy Acid Oxidase Assay Kit (Fluorometric) (Cat. No. K2010).

**RELATED PRODUCTS:**

- Hydroxy Acid Oxidase Activity Assay Kit (K2010)
- Oxalate Decarboxylase, Active Bacterial Recombinant (7262)
- B. subtilis Recombinant, Oxalate oxidase (OxOx) (P1091)

**FOR RESEARCH USE ONLY! Not to be used on humans.**