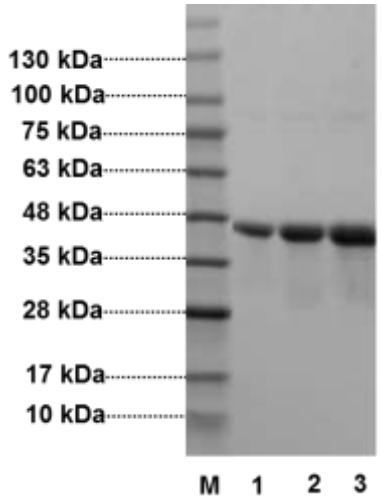
Glycine Oxidase H244K, *Bacillus subtilis* recombinant

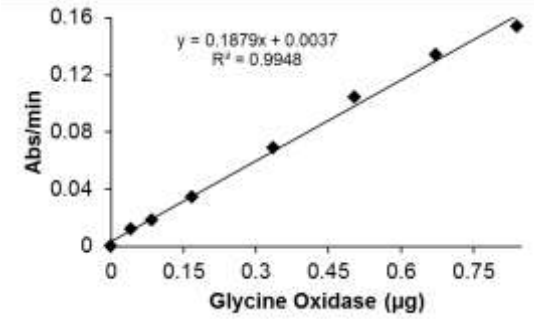
CATALOG #:	7845-250	250 µg
	7845-1000	1000 µg
ALTERNATIVE NAMES:	Glycine oxidase, glycine oxygen oxidoreductase (deaminating), GO	
SOURCE:	*E. coli*	
FORM:	Liquid	
FORMULATION:	4.0 mg/ml in 20 mM potassium phosphate, 100 mM NaCl, pH 8.0 and 10% glycerol	
PURITY:	≥90% by SDS-PAGE.	
MOL. WT.:	43.1 kDa (1-369 aa, NT His Tag)	
SPECIFIC ACTIVITY:	1200 mU/mg	
UNIT DEFINITION:	One unit is defined as the amount of enzyme required to convert one micromole of glycine into glyoxylate and hydrogen peroxide at pH 8.5 at 37°C.	
STORAGE CONDITIONS:	Store at –20°C. Stable for at least 1 year as supplied. Avoid repeated freeze and thaw cycles.	

BACKGROUND: Glycine oxidase (GO) from *Bacillus subtilis* (EC 1.4.3.19) is a homotetrameric flavin-dependent oxidoreductase. Each GO monomer is non-covalently bound to flavin adenine dinucleotide. GO catalyzes oxidative deamination of various primary and secondary amines (e.g. glycine, sarcosine, N-ethylglycine) and some D-amino acids (e.g. D -alanine, D -proline, D -valine) to the corresponding α-keto acids and hydrogen peroxide. Primarily, glycine oxidase catalyzes the oxidation of glycine in the biosynthesis of thiamine. The variant H244K shows a higher substrate specificity ratio for glycine versus sarcosine and a 5-fold improved specific activity in comparison to the wild-type.

APPLICATIONS: Recombinant Glycine Oxidase H244K can be used in inhibitor screening assays, activity studies, selectivity profiling, western blotting, ELISA, and numerous similar applications



SDS-PAGE (4-20%) of Glycine Oxidase:
M: Protein Marker
1: Glycine Oxidase (5 µg)
2: Glycine Oxidase (10 µg)
3: Glycine Oxidase (15 µg)



Catalytic activity of purified Glycine oxidase in converting glycine into glyoxylate and hydrogen peroxide

RELATED PRODUCTS:

- Cystathionine β Synthase, human recombinant (7844-100)
- Cytochrome Oxidase Activity Colorimetric Assay Kit (K287-100)
- Glucose Oxidase Activity Colorimetric/Fluorometric Assay Kit (K788-100)
- Monoamine Oxidase Activity (Total MAO/MAO-A/MAO-B) Fluorometric Assay Kit (K795-100)

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