

## Glycine Oxidase H244K from Bacillus subtilis, recombinant

Cat. No. NATE-1674

Lot. No. (See product label)

### Introduction

**Description** 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  $\alpha$ -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.

**Synonyms** Glycine oxidase; glycine oxygen oxidoreductase (deaminating); GO; EC 1.4.3.19; 39307-16-9

### Product Information

**Species** Bacillus subtilis

**Source** E. coli

**Form** Liquid

**EC Number** EC 1.4.3.19

**CAS No.** 39307-16-9

**Molecular Weight** 43.1 kDa (1-369 aa, NT His Tag)

**Purity** > 90% by SDS-PAGE

**Activity** 1200 mU/mg

**Concentration** 4.0 mg/ml

**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 and Shipping Information

**Storage** Store at -20°C. Stable for at least 1 year as supplied. Avoid repeated freeze and thaw cycles.