Creative Enzymes®

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 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.
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.