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Glycine Oxidase Antibody

Rabbit Polyclonal Antibody
Catalog # ABV11810

Product Information

Application	WB
Primary Accession	O31616
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	40937

Additional Information

Gene ID	939377
Positive Control	WB: r Glycine Oxidase
Application & Usage	WB: 1-4 g
Alias Symbol	thiO
Other Names	Glycine oxidase, glycine oxygen oxidoreductase (deaminating), GO
Appearance	Colorless liquid
Formulation	In PBS pH 7.2, 0.01 % BSA, 0.03 % ProClin® and 50 % glycerol
Reconstitution & Storage	-20 °C
Background Descriptions	
Precautions	Glycine Oxidase Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	thiO {ECO:0000303|PubMed:12627963}
Function	Catalyzes the FAD-dependent oxidative deamination of various amines and D-amino acids to yield the corresponding alpha-keto acids, ammonia/amine, and hydrogen peroxide. Oxidizes sarcosine (N- methylglycine), N-ethylglycine and glycine (PubMed:11744710, PubMed:19864430, PubMed:9827558). Can also oxidize the herbicide glyphosate (N-phosphonomethylglycine) (PubMed:19864430). Displays lower activities on D-alanine, D-valine, D-proline and D-methionine (PubMed:11744710, PubMed:9827558). Does not act on L-amino acids and other D-amino acids (PubMed:9827558). Is essential for thiamine biosynthesis since the oxidation of glycine catalyzed by ThiO generates the glycine imine intermediate (dehydroglycine) required for the biosynthesis of the thiazole ring of thiamine pyrophosphate

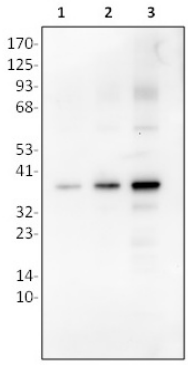
(PubMed:12627963).

Cellular Location Cytoplasm.

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.

Images



Western blot analysis of Glycine Oxidase: Lane1: r Glycine Oxidase, 2ng; Lane2: r Glycine Oxidase, 10ng; Lane3: r Glycine Oxidase, 50ng;

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.