10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Glycine Oxidase Antibody
Rabbit Polyclonal Antibody
Catalog # ABV11810

Specification

Glycine Oxidase Antibody - Product Information

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

Glycine Oxidase Antibody - Additional Information

Gene ID 939377

Positive Control	**WB: r Glycine Oxidase**
Application & Usage	**WB: 1-4 µg**
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.

Glycine Oxidase Antibody - 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:9827558, PubMed:<a

href="http://www.uniprot.org/citations/11744710" target="_blank">11744710, PubMed:19864430). Can also oxidize the herbicide glyphosate (N-phosphonomethylglycine) (PubMed:19864430). Displays lower activities on D-alanine, D-valine, D-proline and D-methionine (PubMed:9827558, PubMed:11744710). 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).

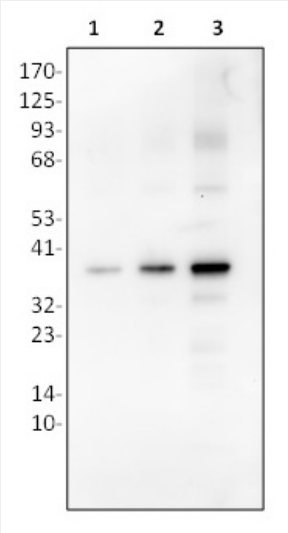
Cellular Location
Cytoplasm.

Glycine Oxidase Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Glycine Oxidase Antibody - Images



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

Glycine Oxidase Antibody - 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.