

Glycine Assay Kit

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CATALOG #

AAA44647

PRODUCT SYNONYMS

Glycine; Glycine Assay Kit; Glycine assay kit

PRODUCT SPECIFICATIONS

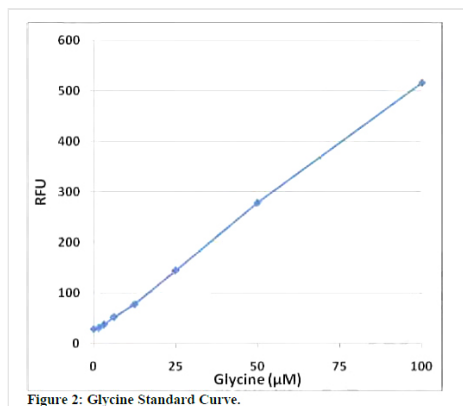
Dry Ice Note

The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.

Preparation and Storage

Upon receipt, store the 1X Assay Buffer at room temperature. Store all other components at -20 degree C. The Fluorometric Probe is light sensitive and must be stored accordingly. Avoid multiple freeze/thaw cycles.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Glycine assay kit	Background: Glycine is an amino acid containing amine (-NH2) and carboxyl (-COOH) functional groups, as well as a single hydrogen as its side-chain. Glycine is a non essential amino acid since it is synthesized in the body from the amino acid serine. In most organisms, the enzyme serine hydroxymethyltransferase uses the cofactor pyridoxal phosphate to convert serine (in the presence of tetrahydrofolate) to glycine and methylene tetrahydrofolate. In the vertebrate liver, glycine synthase is used to convert methylene tetrahydrofolate and NADH to glycine, tetrahydrofolate, and NAD+. Glycine is one of 20 natural amino acids that serve as fundamental building blocks for the production of proteins. In conjunction with hydroxyproline, glycine makes up the helical structure of collagen. In higher eukaryotes, glycine and succinyl-CoA are used by aminolevulinic acid synthase to make delta- aminolevulinic acid, the main precursor to porphyrins. In the central nervous system, glycine serves as an inhibitory neurotransmitter in the spinal cord, acting as an NMDA receptor co-agonist with glutamate. Glycine supplements have been shown to improve sleep quality, and glycine used in conjunction with other common drugs has been proven beneficial in treating schizophrenia. Bile acids, which are steroid acids found predominantly in the bile of mammals and other vertebrates, are conjugated with glycine (as well as taurine) in the liver, forming primary bile acids. Glycine Assay Kit is a simple fluorometric assay that measures the amount of free glycine present in foods or biological samples in a 96-well microtiter plate format. Glycine found in polypeptide chains (peptides and proteins) or other conjugated molecules (primary bile acids) are not detected. Each kit provides sufficient reagents to perform up to 100 assays, including blanks, glycine standards and unknown samples. Sample glycine concentrations are determined by comparison with a known glycine standard. The kit has a detection sensitivity limit of 1.56 uM glycine. Principle of the Assay: Glycine Assay Kit measures glycine within food or biological samples. Glycine is deaminated by glycine oxidase into glyoxylate plus ammonia and hydrogen peroxide. The hydrogen peroxide is then detected with a highly specific fluorometric probe. Horseradish peroxidase catalyzes the reaction between the probe and hydrogen peroxide, which bind in a 1:1 ratio. Samples and standards are read with a standard 96-well fluorometric plate reader. Samples are compared to a known concentration of glycine standard within the 96-well microtiter plate format (Figure 1).
Product Categories/Family for Glycine assay kit	Metabolism Research; Cellular Metabolism; Amino Acid Metabolism

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/assay-kits/glycine/44647>