CREATIVE BIOMART®
Assay Kit

Glycine Fluorometric Assay Kit

Product Information

Cat.No. Kit-2141

Product Overview

Glycine Assay Kit provides a simple, sensitive, and high-throughput adaptable assay that detects physiological concentration of glycine in a variety of biological fluids. The principle of the assay is based on the oxidation of glycine producing a fluorophore (Ex/Em = 535/587 nm) with a stable signal, which is directly proportional to the amount of GLY in the sample. The assay is specific and other standard and non-standard amino acids do not interfere with the assay. The assay can detect as little as 1 µM of Glycine in a variety of samples.

Size

100 assays

Description

Glycine (GLY) is one of the 20 standard amino acids commonly found in proteins. GLY side chain is a hydrogen substituent, thus it is the only amino acid that is not chiral and the smallest among the proteogenic amino acids. Basic functions of Glycine include the participation in the synthesis of creatine, glutathione, heme groups, and conjugated bile acids (bile salts). It is also present as one of the most abundant residues in the triple-helical structure of collagen. It acts as a glucogenic amino acid regulating sugar levels in blood. Therefore, glycine supplementation has been used in patients suffering anemia, hypoglycemia and chronic fatigue. In cancer cells, GLY consumption is highly correlated to cancer cell proliferation, via purine synthesis. Glycine uptake in cancer cell studies supports the role of this amino acid in tumorigenesis and malignancy. GLY possesses both inhibitory and excitatory neurotransmitter functions in the brain stem and spinal cord.

Applications

Estimation of glycine in various biological samples

Target Species

Mammalian

Storage

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Store kit at -20°C, protected from light. Briefly spin small vials prior to opening. Read entire protocol before performing the assay.GLY Assay Buffer: Store at -20°C or 4°C. Bring to room temperature (RT) before use.GLY Probe: Light sensitive. Store at -20°C. Bring to RT before use.GLY Enzyme Mix: Reconstitute with 55 µl GLY Assay Buffer containing 10% molecular biology grade glycerol (not provided). MakeGLY Assay Buffer containing 10% glycerol by adding 10 µl of 100% Glycerol to 90 µl of GLY Assay Buffer, vortex for 30 sec. Aliquotand store at -20°C. Light sensitive, protect from light. Freeze/thaw should be limited to two times. Keep on ice during use.GLY Developer: Reconstitute with 220 µl of GLY Assay Buffer. Aliquot and store at -20°C. Freeze/thaw should be limited to one time.Keep on ice during use.Glycine Standard: Reconstitute with 100 µl of dH2O to generate 100 mM Glycine Standard. Dissolve completely. Store at -20°C. Usewithin 2 months.

Kit Components

GLY Assay Buffer: 25 mlGLY Probe: 0.4 mlGLY Enzyme Mix: 1 vialGLY Developer: 1 vialGLY Standard: 1 vial

Detection method Fluorescence (Ex/Em 535/587 nm)

Compatible Sample Types

Biological fluids such as serum, plasma, saliva, urine, etc

Features & Benefits

• Simple, rapid & convenient assay• Limit of detection: 1 µM• Very specific, does not interact with other standard and non-standard amino acids

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