CREATIVE BIOMART®
Assay Kit

Glutamate Oxidase Fluorometric Assay Kit (Near Infrared)

Product Information

Cat.No. Kit-0385

Product Overview

Glutamate Oxidase Assay Kit (Fluorometric-Near Infrared) provides a quick and an ultrasensitive method for the measurement of glutamate oxidase in solution and in cell lysates. In the assay, L-glutamic acid is oxidized to a-ketoglutarate, NH3 and H2O2 by glutamate oxidase. The kit uses our AbRed Indicator substrate which can react with H2O2 when catalyzed by horseradish peroxidase (HRP) to generate the highly fluorescent product. The signal can be read with either a fluorescence microplate reader at Ex/Em = 530-570 nm/590 -600 nm (optimal Ex/Em = 540 nm/590 nm) or an absorbance microplate reader at 576±5 nm. With the Glutamate Oxidase Assay Kit (Fluorometric-Near Infrared), we have detected as little as 40 μU/mL glutamate oxidase in a 100 µL reaction volume. It can be performed in a convenient 96-well or 384-well microtiter-plate format and easily adapted to automation without a separation step.

Description

Glutamate oxidase specifically catalyzes the oxidative deamination of L-glutamate in the presence of water and oxygen with the formation of ketoglutarate, ammonia, and hydrogen peroxide. Glutamate oxidase can be used as an analytic reagent and as a basis for developing biosensors for the determination of L-glutamate, L-glutamine, ammonia, and creatinine. These biosensors can be used in clinical biochemistry for the determination of glutamate-pyruvate transaminase and glutamate-oxalacetate transaminase in biological fluids, which makes the early diagnosis of heart and liver diseases possible.

Applications

Functional Studies

Target Species

Reacts with: HumanPredicted to work with: all Mammals

Storage

Keep at -20°C. Avoid exposure to light

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Kit Components
Components 200 testsAbRed Indicator 1 vialAssay Buffer 1 x 20mlDMSO 1 x 200µlGlutamate Oxidase Standard 1 vialGlutamic Acid 1 x 3.4mgHorseradish Peroxidase 1 vial
Compatible Sample Types
Cell Lysate
Sensitivity
40 uU/ml

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