

Glutamate Oxidase Fluorometric Assay Kit (Near Infrared)

Cat. No. Kit-0385 **Lot. No.** (See product label)

SPECIFICATION

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 α -ketoglutarate, NH_3 and H_2O_2 by glutamate oxidase. The kit uses our AbRed Indicator substrate which can react with H_2O_2 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 $\pm$ 5 nm. With the Glutamate Oxidase Assay Kit (Fluorometric-Near Infrared), we have detected as little as 40 $\mu\text{U/mL}$ glutamate oxidase in a 100 μ 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

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Target Species	Reacts with: Human Predicted to work with: all Mammals
Storage	Keep at -20°C. Avoid exposure to light
Kit Components	Components 200 tests AbRed Indicator 1 vial Assay Buffer 1 x 20ml DMSO 1 x 200µl Glutamate Oxidase Standard 1 vial Glutamic Acid 1 x 3.4mg Horseradish Peroxidase 1 vial
Compatible Sample Types	Cell Lysate
Sensitivity	40 uU/ml

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