



# Glutamate Oxidase Fluorometric Assay Kit (Near Infrared)

## Product Information

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### Cat.No.

Kit-0385

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### Product Overview

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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  $\alpha$ -ketoglutarate,  $\text{NH}_3$  and  $\text{H}_2\text{O}_2$  by glutamate oxidase. The kit uses our AbRed Indicator substrate which can react with  $\text{H}_2\text{O}_2$  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  $100 \mu\text{L}$  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.

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### Description

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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.

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### Applications

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Functional Studies

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### Target Species

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Reacts with: Human Predicted to work with: all Mammals

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### Storage

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CREATIVE **BIOMART**<sup>®</sup>  
Assay Kit

## Glutamate Oxidase Fluorometric Assay Kit (Near Infrared)

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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