CREATIVE BIOMART®
Assay Kit

Hydrogen Peroxidase Fluorometric Assay Kit (Near Infrared)

Product Information

Cat.No. Kit-0405

Product Overview

Hydrogen Peroxidase Assay Kit (Fluorometric-Near Infrared) uses our unique AbIR Peroxidase Indicator substrate to quantify hydrogen peroxide in solutions and cell extracts. AbIR Peroxidase Indicator generates the fluorescence that is pH-independent from pH 4 to 10. It is a superior alternative to ADHP for the detections that require low pH where ADHP has reduced fluorescence. In addition, AbIR Peroxidase Indicator generates a product that has maximum absorption at 647 nm with maximum emission at 670 nm. This near infrared fluorescence minimizes the assay background that is often caused by the autofluorescence of biological samples. It can also be used to detect a variety of oxidase activities through enzyme-coupled reactions.it is an optimized "mix and read" assay that is compatible with HTS liquid handling instruments. It provides a sensitive, one-step fluorometric assay to detect as little as 3 pmol H2O2/100 µL assay volume (30 nM). The assay can be performed in a convenient 96-well or 384-well microtiter-plate format and easily adapted to automation without a separation step. Its signal can be easily read by either a fluorescence microplate reader at Ex/Em = ~640/680 nm or an absorbance microplate reader at ~650 nm. Due to its long emission wavelength, this kit has low interference from biological samples.

Description

Hydrogen peroxide (H2O2) is a reactive oxygen metabolic by-product that serves as a key regulator for a number of oxidative stress-related states. It is involved in a number of biological events that have been linked to asthma, atherosclerosis, diabetic vasculopathy, osteoporosis, a number of neurodegenerative diseases and Down"s syndrome. Perhaps the most intriguing aspect of H2O2 biology is the recent report that antibodies have the capacity to convert molecular oxygen into hydrogen peroxide to contribute to the normal recognition and destruction processes of the immune system. Measurement of this reactive species will help to determine how oxidative stress modulates a variety of intracellular pathways.

Applications

Functional Studies

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Assay Kit

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Target Species
Reacts with: HumanPredicted to work with: all Mammals
Storage
Keep at -20°C. Avoid exposure to light
Kit Components
Components 500 testsAssay Buffer 1 x 100mlDMSO 1 x 0.5mlHorseradish Peroxidase 1 x 20 unitsHydrogen Peroxide Solution 1 x 200µlIR peroxidase indicator 1 vial
Compatible Sample Types
Cell culture extracts
Sensitivity
30 nM

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