CREATIVE BIOMART®
Assay Kit

Xanthine Oxidase Fluorometric Assay Kit

Product Information

Cat.No. Kit-0846

Product Overview

Xanthine Oxidase Assay Kit provides a simple and accurate method for quantifying xanthine oxidase activity. The assay is based on a multistep enzymatic reaction in which xanthine oxidase first produces H2O2 during oxidation of hypoxanthine. In the presence of horseradish peroxidase, the H2O2 reacts with ADHP (10-acetyl-3,7-dihydroxyphenoxazine) in a 1:1 stoichiometry to produce the highly fluorescent compound resorufin. Resorufin fluorescence can be easily analyzed with an excitation wavelength of 520-550 nm and an emission wavelength of 585-595 nm

Description

Xanthine oxidase (XO), or xanthine oxidoreductase, is a complex molybdoflavoenzyme which, in humans, is recognized as the terminal enzyme of purine catabolism, catalyzing the hydroxylation of hypoxanthine to xanthine and then to uric acid. When acting as an NADH oxidase, XO is a generator of superoxide, a powerful reactive oxygen species (ROS). XO has also been noted to produce hydrogen peroxide (H2O2) and superoxide during ischemiareperfusion injury. Due to their highly reactive nature, these ROS affect various molecular components of the cell, with excess amounts leading to cell degeneration and death. XO is present in nearly all species. In mammalian tissues, XO is found predominantly in the liver and intestine. Human XO activity is almost exclusively limited to these tissues, with only trace levels found elsewhere in the body. However, in several disease states, levels of circulating XO have been seen to increase dramatically. This is especially true of liver disease, during which circulating levels of XO may be 1,000-fold greater.

Usage

Please read these instructions carefully before beginning this assay.For research use only. Not for human or diagnostic use.

Storage

Stability: 1 year;Storage: -20°C;This kit will perform as specified if stored at -20°C and used before the expiration date indicated on the outside of the box.

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Kit Components

XO Assay Buffer (10X): 1 vial;XO Sample Buffer (10X): 1 vial;Xanthine Oxidase Standard: 2 vials;XO Detector: 3 vials;XO Horseradish Peroxidase: 2 vials;DMSO Assay Reagent: 1 vial;96-Well Solid Plate (black): 1 plate;96-Well Cover Sheet: 1 cover

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