CREATIVE BIOMART®
Assay Kit

Highly Stable ATP Assay Kit

Product Information

Cat.No.

Kit-0115

Product Overview

Highly Stable ATP Assay Kit is a high throughput and extremely sensitive detection of ATP production or consumption.

Description

Adenosine-5"-triphosphate (ATP) is a central molecule in the chemistry of all living things and is used to monitor many biological processes. An accurate, reliable method to detect minute ATP levels such as the Luciferase/Luciferin system has broad application. Conventional Luciferase/Luciferin ATP detection systems are unstable since luciferase loses activity rapidly. We have developed a highly stable Luciferase; a genetically modified variant derived from the Luciferase of Diaphanes pectinealis (Chinese Firefly) endemic to Yunnan province, China. We designate our recombinant highly stable luciferase rLucHS. Compared to the normal phenotype of Photinus pyralis, rLucHS provides enhanced stability, excellent sensitivity, and a broader and more physiologically relevant effective pH range. At all pH"s below ~ 8.2, rLucHS has a significantly higher relative activity than Photinus luciferase and is stable for weeks at room temperature and >60 minutes at 37°C. Using the protocol outlined here, the quantitation range is between approximately 1 nmol to 10 fmol/assay. The specific activity of rLucHS is ~ 5 x 1011 RLU/mg protein. The assay can be fully automated for high throughput (1 sec/sample) and is extremely sensitive and is ideal for detecting ATP production or consumption in a variety of processes and enzymatic reactions.

Target Species

Mammals

Usage

For research use only (RUO)

Storage

Store kit at -20°C.

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Kit Components
10X Reaction Buffer. Cap code: purple. 2.0 mLReconstitution Buffer. Cap code: clear. 1.1 mLEnzyme Mix (lyophilized). Cap code: green. 1 vialATP Standard (MW 551) (lyophilized). Cap code: yellow. 1 vial
Detection method Luminescence
Compatible Sample Types
Cell Homogenate, Tissue Homogenate

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