CREATIVE BIOMART®
Assay Kit

ATP Colorimetric Assay Kit (384-well)

Product Information

Cat

Kit-1046

Common Name

ATP

Cat.No.

Kit-1046

Description

Adenosine Triphosphate (ATP) is a derivative of adenosine nucleotide that contains a large amount of biochemical energy stored in its high-energy phosphate bonds. ATP releases energy when it is hydrolyzed into ADP or AMP (Adenosine Di or Mono Phosphate). This energy is used by cells to drive various cellular events like metabolic processes, enzymatic reactions, motility, cell division and muscle contraction. It is also used as a substrate in signal transduction, by kinases to phosphorylate proteins and lipids, and by adenylate cyclase to produce cyclic AMP. In eukaryotic cells, ATP is produced via cellular respiration in mitochondria and by photosynthesis in chloroplasts. Anaerobic bacteria can produce ATP by breaking down nutrients into simpler metabolites, and then using the released energy to form ATP from ADP and Pi (inorganic phosphate). Aerobic bacteria also make ATP from ADP and Pi by ATPase which takes the advantage of 'proton motive force' when protons travel back to cytosol from periplasmic space. There are many commercially available kits that detects ATP in femtomoles or less by using luminescence but these products require specialized instrumentation and utilize luciferase which can be difficult to maintain in active form. EZScreen; ATP Colorimetric Assay Kit is designed to be a robust, simple, stable, colorimetric method which utilizes a series of enzymatic reactions to form a product that is easily quantified at OD 570 nm. The method is rapid, simple, sensitive and designed for high-throughput format using a 384-well plate. The kit can detect as low as 80 pmol of ATP in a 384 well assay plate.

Applications

ATP Assay Kit provides a convenient tool for sensitive detection of the intracellular nucleotides ATP

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Assay Kit

ATP Colorimetric Assay Kit (384-well)

Storage
-20°C
Shipping
Gel Pack
Size
400 assays
Kit Components
ATP Assay Buffer; ATP Probe; ATP Converter (lyophilized); Developer Mix (lyophilized); ATP Standard (1 μmol; lyophilized)
Target Species
All
Detection method Absorbance (570 nm)
Features & Benefits
Simple procedure; takes less than 1 hour; Fast and convenient; Kit is designed to be a robust method which enzymatic detection of ATP in numerous biological samples

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