CREATIVE BIOMART®
Assay Kit

HTS kinesin ATPase Endpoint Assay Biochem Kit

Product Information

Cat.No. Kit-0119

Product Overview

Eukaryotic kinesin motor proteins orchestrate a wide range of kinetic events within a cell. They have been shown to move cargo, such as chromosomes and vesicles, along microtubule tracks. They also play a major role in the organization of cytoskeletal architecture as evidenced in the establishment of the microtubule spindle during mitosis. Kinesins operate by utilizing the energy of ATP hydrolysis to move along their microtubule (MT) substrates. Once a kinesin motor binds to its MT track, the ATPase rate of the motor is often enhanced several hundred to several thousand-fold. MT activated kinesin ATPase is a major parameter in motor function and serves as a powerful method to monitor and study kinesin activity under various experimental conditions.As part of its Cytoskeleton Motor Werks (CMW) line of research reagents, Cytoskeleton, Inc. has developed the Kinesin ATPase End-Point Biochem Kit. The kinesin end-point assay is an extremely quick and economical way to measure inorganic phosphate (Pi) generated during the microtubule activated ATPase activity of kinesin motor proteins. Large numbers of assays can be performed simultaneously in a homogenous reaction, making the assay highly suitable for HTS applications. The assay is based upon a colorimetric change, measured at 650 nm.

Size

1000 assays

Applications

1. Measuring microtubule-activated kinesin ATPase activity.2. Discovering/characterizing kinesin inhibitors.3. Discovering/characterizing kinesin regulating cofactors.

Kit Components

CytoPhos Reagent: One bottle. 70 ml. Phosphate standard: One tube. Contains 1 ml of 0.1 mM phosphate standard. Kinesin Motor Protein: 2 tubes of kinesin motor domain-GST tagged protein, lyophilized. Pre-formed Microtubules: 4 tubes, lyophilized. Kinesin Reaction Buffer: 1 bottle. 100 ml. Taxol: 4 tubes, lyophilized. DMSO: 1 tube, used to resuspend taxol. Labels for Aliquoted Reagents: Microtubules (MTs) need to be aliquoted into 40 individual tubes. The kit box supplied can be used

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as storage container for these aliquots and the label provided can be used to identify these frozen stocks. See Section VI for details.The label is "BK053 MT STOCKS". A label is also supplied for ATP stocks. The ATP is not provided in this kit.

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