CREATIVE BIOMART®
Assay Kit

PDE4A Assay Kit

Product Information

Cat.No. Kit-1838

Product Overview

Phosphodiesterases (PDEs) play an important role in the dynamic regulation of cAMP and cGMP signaling. PDE4A is widely expressed in brain tumors and promotes their growth and its inhibitor Rolipram has been identified as a potent anti-inflammatory agent. Phosphodiesterases catalyze the hydrolysis of the phosphodiester bond in dye-labeled cyclic monophosphates. Beads selectively bind the phosphate group in the nucleotide product. This increases the size of the nucleotide relative to unreacted cyclic monophosphate. In the polarization assay, dye molecules with absorption transition vectors parallel to the linearly-polarized excitation light are selectively excited. Dyes attached to the rapidly-rotating cyclic monophosphates will obtain random orientations and emit light with low polarization. Dyes attached to the slowly-rotating nucleotide-bead complexes will not have time to reorient and therefore will emit highly polarized light.

Size

96 reactions

Description

The PDE4A Assay Kit is designed for identification of PDE4A inhibitors using fluorescence polarization. The assay is based on the binding of a fluorescent nucleotide monophosphate generated by PDE4A to the binding agent. The key to the PDE4A1A Assay Kit is the specific binding agent. Using this kit, only two simple steps on a microtiter plate are required for PDE4A1A reactions. First, the fluorescently labeled cAMP is incubated with a sample containing PDE4A1A for 1 hour. Second, a binding agent is added to the reaction mix to produce a change in fluorescent polarization that can then be measured using a fluorescence reader equipped for the measurement of fluorescence polarization.

Applications

Great for studying enzyme kinetics and screening small molecular inhibitors for drug discovery and HTS applications.

Storage

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At least 6 months from date of receipt, when stored as directed. Kit components require different storage conditions. Be sure to store each component at the proper temperature upon arrival.

Kit Components

PDE4A1A recombinant enzyme: 1 µg; -80°C FAM-Cyclic-3', 5'-AMP (20 µM): 50 µl; -80°C PDE assay buffer: 25 ml; -20°C Binding Agent: 100 µl; +4°C Binding Agent Diluent: 10 ml; +4°C Black, low binding, microtiter plate: 1; Room temp.

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