CREATIVE BIOMART®
Assay Kit

PDE2A Assay Kit II

Product Information

Cat.No. Kit-1833

Product Overview

Phosphodiesterases (PDEs) play an important role in the dynamic regulation of cAMP and cAMP signaling. PDE2A, also known as cAMP-stimulated phosphodiesterase, hydrolyzes cyclic nucleotides cAMP (Km = 2.4□M) and cAMP, and is involved in the regulation of blood pressure and fluid homeostasis.

Size

384 reactions

Description

The PDE2A Assay Kit is designed for identification of PDE2A inhibitors using fluorescence polarization.The assay is based on the binding of a fluorescent nucleotide monophosphate generated by PDE2A to the binding agent. PDE2A catalyzes the hydrolysis of the phosphodiester bond in dye-labeled cyclic adenosine monophosphate (cAMP). Nanoparticle beads selectively bind the phosphate group in the nucleotide product. This increases the size of the nucleotide relative to unreacted cAMP. Since the degree of polarization of a fluorophore is inversely related to its molecular rotation, dyes attached to the slowly-rotating nucleotide-bead complexes will not have time to reorient and therefore will emit highly polarized light. Conversely, dyes attached to the rapidly-rotating cyclic monophosphates will obtain random orientations and emit light with low polarization. The key to the PDE2A Assay Kit is the specific binding agent. Using this kit, only two simple steps on a microtiter plate are required for PDE2A reactions. First, the fluorescently labeled cAMP is incubated with a sample containing PDE2A1 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.

Applications

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

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Storage

Stable 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

PDE2A1 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: 250 µl; +4°C cAMP Binding Agent Diluent: 25 ml; +4°C Black, low binding, microtiter plate: 1; Room temp.

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