CREATIVE BIOMART®
Assay Kit

PDE5A1 Assay Kit II

Product Information

Cat.No. Kit-1846

Product Overview

Phosphodiesterases (PDEs) play an important role in the dynamic regulation of cAMP and cGMP signaling. PDE5A, also known as cGMP-inhibited phosphodiesterase, has been implicated in cardiovascular function and fertility.

Size

384 rxns

Description

The PDE5A1 Assay Kit is designed for identification of PDE5A1 inhibitors using fluorescence polarization. The assay is based on the binding of a fluorescent nucleotide monophosphate generated by PDE5A to the binding agent. PDE5A catalyzes the hydrolysis of the phosphodiester bond in dye-labeled cyclic guanosine monophosphate. Nanoparticle beads selectively bind the phosphate group in the nucleotide product. This increases the size of the nucleotide relative to unreacted cyclic guanosine monophosphate. In the polarization assay, dye molecules with absorption transition vectors parallel to the linearlypolarized 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. The key to the PDE5A1 Assay Kit is the specific binding agent. Using this kit, only two simple steps on a microtiter plate are required for PDE5A1 reactions. First, the fluorescently labeled cGMP is incubated with a sample containing PDE5A1 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.

Storage

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Email:info@creative-biomart.org
Fax:1-631-938-8127
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6 months from date of receipt when stored as directed

Kit Components

PDE5A: 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 Binding Agent Diluent: 25 ml; +4°C Black, low binding, microtiter plate: 1; Room temp.

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