CREATIVE BIOMART®
Assay Kit

PDE7B Assay Kit

Product Information

Cat.No. Kit-1848

Product Overview

Phosphodiesterases (PDEs) play an important role in the dynamic regulation of cAMP and cGMP signaling. PDE7B is highly expressed in the pancreas and in other various tissues. Inhibition of PDE7B leads to induction of apoptosis. 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 PDE7B Assay Kit is designed for identification of PDE7B inhibitors using fluorescence polarization. The assay is based on the binding of a fluorescent nucleotide monophosphate generated by PDE7B to the binding agent. The key to the PDE7B Assay Kit is the specific binding agent. Using this kit, only two simple steps on a microtiter plate are required for PDE7B reactions. First, the fluorescently labeled cAMP is incubated with a sample containing PDE7B 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

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.org
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

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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

PDE7B recombinant enzyme: 1 µg; -80°C FAM-Cyclic-3′, 5′-AMP (20 µM): 20 µl; -80°C PDE assay buffer: 25 ml; -20°C Binding Agent: 200 µl; +4°C Binding Agent Diluent: 20 ml; +4°C Black, low binding, microtiter plate: 1; Room temp.

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