CREATIVE BIOMART®
Assay Kit

PDE4D3 TR-FRET Assay Kit

Product Information

Cat.No. Kit-1843

Product Overview

Phosphodiesterases (PDEs) play an important role in dynamic regulation of cAMP and cGMP signaling. PDE4D is a regulator of airway smooth-muscle contractility, and has been identified as a potential risk predictor for ischemic stroke. Additionally, PDE4D has been associated with asthma pathophysiology and bone formation. The PDE4D gene encodes at least 9 different isoforms. The assay is based on the generation of FAM-labeled nucleotide monophosphates by the phosphodiesterase. These phosphate groups bind to terbium-labeled nanoparticles, resulting in energy transfer from the terbium to the FAM, which emits a fluorescent signal at 520 nm. The change in fluorescent intensity can be easily measured using a fluorescence plate reader.

Size

96 reactions

Description

The PDE4D TR-FRET Assay Kit is designed for identification of inhibitors of PDE4D using TR-FRET (Time Resoled Fluorescence Resonance Energy Transfer) technology. Using this kit, only two simple steps on a microtiter plate are required for the PDE4D activity assay. First, the fluorescent-labeled cAMP is incubated with a sample containing PDE4D3 for 1 hour. Second, a binding agent and a terbium donor are added to the reaction mix and incubated for 1 hour. Then, fluorescence intensity can be measured using a fluorescence reader.

Applications

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

Storage

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

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PDE4D3 recombinant enzyme: 1 µg; -80°C FAM-Cyclic-3′, 5′-AMP (20 µM): 20 µl; -80°C PDE assay buffer: 25 ml; -20°C Tb donor: 30 µl; -80°C Binding Agent: 200 µl; +4°C Binding Buffer A: 20 ml; +4°C Binding Buffer B: 20 ml; +4°C Black, low binding NUNC microtiter plate: 1; Room temp.

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