

## PDE7A Assay Kit

### Product Information

#### Cat.No.

Kit-1847

#### Product Overview

Phosphodiesterases (PDEs) play an important role in the dynamic regulation of cAMP and cAMP signaling. PDE7A is widely expressed in various tissues including skeletal muscle, T lymphocytes, brain and pancreas and plays an important role in the regulation of osteoblastic differentiation.

#### Size

384 reactions

#### Description

The PDE7A Assay Kit is designed for identification of PDE7A inhibitors using fluorescence polarization. The assay is based on the binding of a fluorescent nucleotide monophosphate generated by PDE7A to the binding agent. PDE7A 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 PDE7A Assay Kit is the specific binding agent. Using this kit, only two simple steps on a microtiter plate are required for PDE7A reactions. First, the fluorescently labeled cAMP is incubated with a sample containing PDE7A 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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## PDE7A Assay Kit

### 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

PDE7A recombinant enzyme: 1  $\mu$ g; -80°C FAM-Cyclic-3', 5'-AMP (20  $\mu$ M): 50  $\mu$ l; -80°C PDE assay buffer: 25 ml; -20°C Binding Agent: 250  $\mu$ l; +4°C Binding Agent Diluent: 25 ml; +4°C Black, low binding, microtiter plate: 1; Room temp.