CREATIVE BIOMART®
Assay Kit

P300 Homogeneous Assay Kit

Product Information

Cat.No. Kit-1791

Product Overview

The adenovirus E1A-associated cellular p300 transcriptional co-activator protein functions as a histone acetyltransferase that regulates transcription via chromatin remodeling and is important in the processes of cell proliferation and differentiation. p300 (also known as KAT3B) acetylates all four core histones in nucleosomes, as well as non-histone targets. p300 mediates cAMP-gene regulation by binding specifically to phosphorylated CREB protein. p300 has also been identified as a co-activator of HIF1A (hypoxia-inducible factor 1 alpha), which plays a role in the stimulation of hypoxia-induced genes such as VEGF. Defects in this gene are a cause of Rubinstein-Taybi syndrome and its dysfunction is linked to a number of human diseases including Parkinson''s, Huntington''s, and Alzheimer''s diseases. p300 may also play a role in epithelial cancer.

Size

384 reactions

Description

The p300 Homogeneous Assay Kit contains an AlphaLISA assay designed for screening inhibitors of p300 in a convenient 384-well format. This efficient method requires no time-consuming washing steps. Only a few simple steps on a microtiter plate are needed. The assay is based on the enzymatic transfer of an acetyl group from acetyl CoA to a specific lysine residue within a biotinylated peptide substrate. After the p300 reaction, the sample is incubated with a combination of an antibody that specifically binds the acetylated peptide and acceptor beads that bind the antibody. This is followed by incubation with streptavidin-labeled donor beads and reading of the Alpha-counts.

Applications

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

Storage

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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

P300 human recombinant enzyme: 1 µg; -80°C Acetyl CoA (1 mM): 500 µl; -80°C 3X HAT assay buffer: 4 ml; -80°C Biotinylated H3 Peptide Substrate: 700 µl; -80°C Primary Antibody 20: 40 µl; -20°C 4X Detection Buffer: 2 ml; -80°C

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