CREATIVE BIOMART®
Assay Kit

Purine Nucleoside Phosphorylase Activity Fluorometric Assay Kit

Product Information

Cat

Kit-0712

Common Name

PNP

Cat.No.

Kit-0712

Product Overview

Rapid, simple & convenient
Limit of quantification is 0.005 µU recombinant Purine Nucleoside Phosphorylase

Description

Purine Nucleoside Phosphorylase (PNP) (E.C. 2.4.2.1.) is an enzyme involved in purine metabolism and it catalyzes the cleavage of the glycosidic bond of ribo-or deoxyribonucleosides, in the presence of inorganic phosphate as a second substrate, to generate the purine base and ribose-1-phosphate or deoxyribose-1-phosphate. It is one of the enzymes of the nucleotide salvage pathways that allows the cell to produce nucleotide monophosphates when the de novo synthesis pathway has been interrupted or is non-existent (as is the case in the brain). PNP is a cytosolic enzyme. PNP deficiency disease leads to toxic buildup of deoxyguanosine in T-cells leading to T-lymphocytopenia with no apparent effects on B-lymphocyte function. Inhibition of PNP is an important target for chemotherapeutic applications and treatment of T-cell mediated autoimmune diseases. PNP deficiency is also associated with neurological problems. In Purine Nucleoside Phosphorylase Activity Assay, hypoxanthine formed from the breakdown of inosine is detected via a multi-step reaction, resulting in the generation of an intermediate that reacts with the PNP Probe. The fluorescent product is measured at Ex/Em = 535/587 nm. Limit of quantification is 0.005 µU recombinant Purine Nucleoside Phosphorylase.

Applications

Detection of Purine Nucleoside Phosphorylase activity in variety of samples

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Usage

For Research Use Only! Not For Use in Humans.

Storage

-20°C

Size

100 assays

Kit Components

- PNP Assay Buffer (10x)
- Enzyme Mix
- Inosine Substrate
- PNP Probe (in dry DMSO)
- Hypoxanthine Standard (10 mM)
- PNP Positive Control

Detection method Fluorescence (Ex/Em = 535/587 nm)

Compatible Sample Types

- Purified recombinant protein
- Cell and tissue lysate

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