



# 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



# Purine Nucleoside Phosphorylase Activity Fluorometric Assay Kit

## 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