

Purine Nucleoside Phosphorylase Activity Fluorometric Assay Kit

Cat. No. Kit-0712 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Rapid, simple & convenient

Limit of quantification is 0.005 μ 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 μ recombinant Purine Nucleoside Phosphorylase.

Applications

Detection of Purine Nucleoside Phosphorylase activity in variety of samples

Usage

For Research Use Only! Not For Use in Humans.

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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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