



User's Manual

Phosphatidylinositol 4-kinase ELISA Kit



DEIA-XYZ10



96T



This product is for research use only and is not intended for diagnostic use.

For illustrative purposes only. To perform the assay the instructions for use provided with the kit have to be used.

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PRODUCT INFORMATION

Intended Use

The Phosphatidylinositol 4-kinase ELISA Kit has been designed to detect and quantify, the end product of a PI 4-Kinase reaction, PI(4)P. The PI 4-Kinase Activity ELISA is a competitive ELISA in which the signal is inversely proportional to the amount of PI(4)P measured.

General Description

Phosphatidylinositol 4-phosphate (PI(4)P) is the most abundant monophosphorylated phosphoinositide found in mammalian cells. It is produced by PtdIns 4-Kinases (PI4K) which phosphorylates the D-4 position of the inositol ring of PtdIns. PI 4-Kinases have been classified into two types, II and III, based on their molecular mass, and modulation by detergent and adenosine. Type II class PI 4-Kinases includes PI4KIIa (PI4K2A) which is involved in many biologic processes ranging from cell growth to endo- and exocytosis. It is also a novel regulator of tumor growth and generates PtdIns4P-rich domains within the Golgi. PI4KIIb (PI4K2B) is primary cytosolic where it is recruited to the membrane and stimulates PI(4,5)P₂ synthesis. Type III PI 4-Kinase, PI4KIIIa (PI4K3A), plays a role in replication of the Hepatitis C virus. These viruses use PI4KIIIa to generate PI(4)P-enriched environments increasing cellular levels of PI(4)P. PI4KIIIb (PI4KB), regulates the golgi reorganization during mitosis. This enzyme is essential for glucose-induced insulin secretion due to its capacity to regulate the release of secretory granules. All of this makes PI 4-Kinases an interesting target for a diverse set of biological functions, disease states, and infections.

Reagents And Materials Provided

1. Colored Mixing Plate: 96-well/1 plate
2. Acetate Plate Seal: 3 Seals
3. PI(4)P Detector: 0.5 µg/1 vial
4. PI(4)P Detection Plate: 96-well/1 plate
5. PI(4)P Standard: 4.79 µg/1 vial
6. Diluent: Powder/1 bottle
7. PI Substrate: 500 µg/1 vial
8. 100 mM EDTA: 100 µL/1 vial
9. ER Buffer: Powder/1 vial
10. 10x PBS-T Buffer: 20 mL/1 bottle
11. Secondary Detector: 300 µL/1 vial
12. TMB Solution: 12 mL/1 bottle
13. 1 N H₂SO₄ Stop Solution: 10 mL/1 bottle

Materials Required But Not Supplied

1. Source of enzyme

2. Adenosine Triphosphate (ATP)
3. Absorbance microtiter plate reader capable of reading at 450 nm.

Storage

2-8°C and -20°C