Fluorescent Phosphate Assay Kit

Cat. No. Kit-0689 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Fluorescent Phosphate Assay Kit is used for assessing phosphate over a wide range of concentrations.
Description	Inorganic phosphate (Pi) is one of the most important ions in biological systems. It functions in a variety of roles.One of the most important roles is as a molecular switch, turning enzyme activity on and off through the mediation of the various protein kinases and phosphatases in biological systems. A highly sensitive assay is desired to monitor Pi in variety samples or monitor Pi changes during kinase and phosphatase reactions. The newly designed Fluorescent Phosphate Assay Kit provides a sensitive, easy, quick means of assessing phosphate over a wide range of concentrations. In the assay, inorganic phosphate reacted with maltose to produce glucose in the present of a special enzyme. The glucose is specifically oxidized to generate a product that reacts with the OxiRed probe to generate fluorescence (Ex/Em=535/587nm). The kit can be used to detect Pi in a variety of samples after reactions of ATPases, GTPases, 5''-nucleotidase, protein phosphatases, acid and alkaline phosphatases, and phosphorylase. Glucose background can be eliminated by doing a glucose control. Phosphate concentrations between 0.4 μM and 10 μM, with a lower limit of detection of approximately 40 pmol, can be directly determined.
Target Species	Mammals
Usage	For research use only (RUO)
Storage	Store kit at -20°C, protect from light. Allow reagents to warm to room temperature and

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	briefly centrifuge vials before opening.
Kit Components	1. Assay Buffer: 25 ml.2. OxiRed probe: 1 vial.3. Dimethylsulfoxide (DMSO; Dried): 0.4 ml.4. Maltose Converter: 1 vial.5. Glucose Developer: 1 vial.6. Substrate: 0.2 ml.7. Phosphate Standard (100mM): 50 µ
Detection method	Fluorometric
Compatible Sample Types	Biological Fluid, Cell Lysate, Culture Medium, Plasma, Serum, Tissue Lysate, Urine

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