Dihydroxyacetone Phosphate Fluorometric Assay Kit

Cat. No. Kit-0278 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Dihydroxyacetone Phosphate Assay Kit (Fluorometric) is used to measure Dhydroxyacetone Phosphate.
Description	Dihydroxyacetone Phosphate (DHAP) is an important intermediate in both lipid biosynthesis and glycolysis. In glycolysis, Fructose-1,6-diphosphate is converted to DHAP and glyceraldehyde-3-phosphate (GAP) by aldolase. Both DHAP and GAP serve as the intracellular triose phosphate pool. DHAP can be further converted into GAP by Triose Phosphate Isomerase (TPI). In humans, TPI deficiency is a rare autosomal disease. It causes hemolytic anemia, neurological diseases, and even death due to blockage of the glycolytic pathway and accumulation of DHAP in erythrocytes. The Dihydroxyacetone Phosphate Assay Kit (Fluorometric) is suitable for measuring low levels of DHAP typically found in a variety of samples. In this kit, TPI converts DHAP to GAP that undergoes a series of reaction and reduces PicoProbe to generate fluorescence. The fluorescence intensity generated is directly proportional to the amount of DihydroxyacetonePhosphate. This simple, sensitive, and easy to use assay kit can detect Dihydroxyacetone Phosphate as low as 0.5 µM in a variety of samples.
Applications	Measurement of Dhydroxyacetone Phosphate in various tissues/cells.Analysis of metabolic pathways such as glycolysis, Calvin cycle in plants, methylglyoxal pathway and lipid biosynthesis.Mechanistic study of human TPI deficiency.
Target Species	Mammals

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Usage	For research use only (RUO)
Storage	Store the kit at -20°C, protected from light.
Kit Components	DHAP Assay Buffer 25 mLPicoProbe (in DMSO) 0.4 mLDHAP Enzyme Mix (Lyophilized) 1 vialDHAP Developer (Lyophilized) 1 vialDHAP Standard (Lyophilized) 1 vial
Detection method	Fluorometric
Compatible Sample Types	Animal tissues: e.g. Liver, Muscle, etcCell culture: Adherent or Suspension cellsBiological fluids: Serum, Plasma, etc

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