

# Triose Phosphate Isomerase Activity Colorimetric Assay Kit

**Cat. No.** Kit-0817    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Product Overview</b> | Triose Phosphate Isomerase Activity Assay Kit (Colorimetric) is used to measure Triose Phosphate Isomerase activity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>      | <p>Triose Phosphate Isomerase (TPI or TIM: EC 5.3.1.1) is an important enzyme for glycolysis. It reversibly interconverts dihydroxyacetone phosphate and glyceraldehyde-3-phosphate, thus maintaining the equilibrium of these two triose phosphates. TPI connects glycolysis to pentose phosphate pathway and lipid metabolism. It is a stable homodimer found in almost all organisms. In humans, TPI deficiency is a rare multisystem disorder and leads to progressive neurological dysfunction, characterized by hemolytic anemia, cardiomyopathy and progressive neuromuscular impairment. Triose Phosphate Isomerase Activity Assay Kit (Colorimetric) provides a quick and easy way for monitoring Triose Phosphate Isomerase activity in a variety of samples. In this kit, Triose Phosphate Isomerase converts dihydroxyacetone phosphate into glyceraldehyde-3-phosphate, which reacts with the Enzyme Mix and Developer to form a colored product with strong absorbance at 450 nm. The assay is simple, sensitive, and high-throughput and can detect Triose Phosphate Isomerase activity as low as 40 mU/mL.</p> |
| <b>Applications</b>     | Measurement of TPI activity in various tissues and cells. Analysis of glycolysis and pentose phosphate pathway and lipid metabolism.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Target Species</b>   | Human, Mammals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Usage</b>            | For research use only (RUO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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| <b>Storage</b>                 | Store kit at -20°C, protected from light.                                                                                                                                                                                    |
| <b>Kit Components</b>          | TPI Assay Buffer 25 mL<br>TPI Substrate (Lyophilized) 1 vial<br>TPI Enzyme Mix (Lyophilized) 1 vial<br>TPI Developer (Lyophilized) 1 vial<br>NADH Standard (Lyophilized) 1 vial<br>TPI Positive Control (Lyophilized) 1 vial |
| <b>Detection method</b>        | Colorimetric                                                                                                                                                                                                                 |
| <b>Compatible Sample Types</b> | Animal tissues: Heart, Kidney, Liver, Muscle, etc<br>Cell culture: Adherent or Suspension cells<br>Human Serum, Human Plasma                                                                                                 |

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