Glucose 6-phosphate Isomerase, human recombinant, expressed in *Escherichia coli*
C-terminal His tag

Catalog Number SAE0005
Storage Temperature –20 °C

CAS RN 9001-41-6
EC 5.3.1.9
Synonyms: Phosphoglucose isomerase, Neuroleukin, Phosphohexose isomerase, Autocrine motility factor, Sperm antigen 36, GPI, PGI, PHI, AMF, NLK, SA-36, GNPI

Product Description
Glucose-6-phosphate isomerase (GPI) is a homodimeric enzyme ubiquitously present in most organisms. GPI catalyzes the interconversion between glucose-6-phosphate and fructose-6-phosphate, the second step of the glycolytic pathway. In mammals, Glucose-6-phosphate isomerase also acts as an autocrine motility factor (AMF), a neuroleukin, and a maturation factor. GPI deficiency is the second most common erythroenzymopathy of glycolytic enzymes after pyruvate kinase deficiency. Inherited deficiency of the enzymatic activity of GPI causes hereditary nonspherocytic hemolytic anemia (HNSHA) in humans, a severe deficiency that can be associated with hydrops fetalis (α-thalassaemia), immediate neonatal death, and neurological impairment.

The enzyme is supplied in a solution of 50 mM Tris-HCl, pH 7.5, and 50% glycerol.

Predicted molecular mass: 64 kDa

Purity: ≥95% (SDS-PAGE)

Specific activity: ≥200 units/mg protein

Unit Definition: One unit will convert 1.0 µmole of D-fructose 6-phosphate to D-glucose 6-phosphate per minute at pH 7.4 at 25 °C.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
It is recommended to dilute the enzyme in buffers supplemented with 1% BSA.

Storage/Stability
Store the product at –20 °C.

When stored at –20 °C, the enzyme retains activity for at least two years. The enzyme can be stored at 4 °C to 25 °C for up to 2 weeks.

References