Creative Enzymes®

Native Fructose-bisphosphate aldolase from Thermophillic bacteria

Cat. No. NATE-1152

Lot. No. (See product label)

Introduction

Description	Fructose-bisphosphate aldolase (EC 4.1.2.13), often just aldolase, is an enzyme catalyzing a reversible reaction that splits the aldol, fructose 1,6-bisphosphate, into the triose phosphates dihydroxyacetone phosphate (DHAP) and glyceraldehyde 3-phosphate (G3P). Aldolase can also produce DHAP from other (3S,4R)-ketose 1-phosphates such as fructose 1-phosphate and sedoheptulose 1,7-bisphosphate. Gluconeogenesis and the Calvin cycle, which are anabolic pathways, use the reverse reaction. Glycolysis, a catabolic pathway, uses the forward reaction. Aldolase is divided into two classes by mechanism.
Applications	Carbon bond formation between dihydroxyacetone phosphate and linear aldehydes.
Synonyms	aldolase; fructose-1,6-bisphosphate triosephosphate-lyase; Fructose-bisphosphate aldolase; fructose diphosphate aldolase; D-fructose-1,6-bisphosphate D-glyceraldehyde-3-phosphate-lyase; EC 4.1.2.13; 9024-52-6

Product Information

Source	Thermophillic bacteria
Form	Frozen liquid
EC Number	EC 4.1.2.13
CAS No.	9024-52-6
Optimum pH	~6.0
Thermal stability	~100% stability for 1 hour at 100°C
Buffer	20 mM Tris-HCl (pH 7.5), 20 mM KCl
Unit Definition	One unit is defined as the amount of enzyme oxidizing 1 μmol of NADH (ε340=6.22 mM-1cm-1) per 1 minute using fructose 1,6-bisphosphate as a substrate.

Storage and Shipping Information

Storage	Store at -20°C