Creative Enzymes®

Native Baker's yeast (S. cerevisiae) D-Ribulose-5-phosphate 3-Epimerase

Cat. No. NATE-0659

Lot. No. (See product label)

Introduction

Description RPE is a metalloenzyme and has been shown to use the divalent Zn2+ ion predominantly for catalysis. Human D-ribulose-5-phosphate 3-epimerase (hRPE) has been shown to use Fe2+ for catalysis.

Applications D-Ribulose-5-phosphate 3-Epimerase is an enzyme that converts the reversible conversion of D-ribulose 5-phosphate into D-xylulose 5-phosphate, which is important for the cellular response against oxidative stress. D-Ribulose-5-phosphate 3-Epimerase is involved in the pentose phosphate pathway, pentose and glucuronate interconversions and carbon fixation. This product is from baker’s yeast and is provided as a lyophilized powder. It is useful in enzyme systems requiring low sulfate.

Synonyms EC 5.1.3.1; RPE; phosphoribulose epimerase; erythrose-4-phosphate isomerase; phosphoketopentose 3-epimerase; xylulose phosphate 3-epimerase; phosphoketopentose epimerase; ribulose 5-phosphate 3-epimerase; D-ribulose phosphate-3-epimerase; D-ribulose 5-phosphate epimerase; D-ribulose-5-P 3-epimerase; D-xylulose-5-phosphate 3-epimerase; pentose-5-phosphate 3-epimerase; 9024-20-8

Product Information

Source Baker's yeast (S. cerevisiae)

Form lyophilized powder. Lyophilized and essentially sulfate-free; contains approx. 35% Citrate buffer salts.

EC Number EC 5.1.3.1

CAS No. 9024-20-8

Activity 50-100 units/mg protein (modified Warburg-Christian)

Unit Definition One unit will convert 1 µmole of D-ribulose 5-phosphate to D-xylulose 5-phosphate per min at pH 7.7 at 25°C when coupled with transketolase, α-glycerophosphate dehydrogenase, and triosephosphate isomerase.

Storage and Shipping Information

Storage −20°C