Creative Enzymes®

Fructosyl-peptide Oxidase from E. coli, Recombinant

Cat. No. DIA-410

Lot. No. (See product label)

Introduction

Description	The fructosyl peptide oxidase is an enzyme that catalyzes the reaction which produces a sugar osone (an α-keto aldehyde), a peptide, and hydrogen peroxide by oxidative cleaving, in the presence of oxygen molecules, the C--N bond in the ketose derivative produced by Amadori rearrangement of glucosylamine produced by the reaction between the hemiacetal of glucose and the N-terminal amino group of a peptide.
Synonyms	Fructosyl-peptide : oxygen oxidoreductase; EC 1.5.3; Fructosyl-peptide Oxidase

Product Information

Species	E. coli
Source	E. coli
Appearance	Yellow lyophilizate
EC Number	EC 1.5.3
Molecular Weight	ca. 60 kDa
Activity	> 4 U/mg lyophilizate
pH Stability	6.0–9.5
Optimum pH	7.5–8.0
Thermal stability	below 45°C
Optimum temperature	35–42°C
Michaelis Constant	3.4 x 10^-3 M (fructosyl-valyl-histidine) 4.4 x 10^-3 M (fructosyl-glycine) 8.9 x 10^-3 M (Nε-fructosyl-lysine)
Structure	monomer of 52 kDa (SDS-PAGE)
Specificity	fructosyl-valyl-histidine (100), fructosyl-glycine (53), Nε-fructosyl-lysine (84)
Stabilizers	EDTA, glutamate
Unit Definition	One unit (U) is defined as the amount of enzyme which produces 1 μmol of hydrogen peroxide per min at 37°C and pH 8.0.

Storage and Shipping Information

Storage	at -20°C
Stability	Stable at 37°C for at least one month