

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 3.4×10^{-3} M (fructosyl-valyl-histidine) 4.4×10^{-3} M (fructosyl-glycine) 8.9×10^{-3} M (N ϵ -fructosyl-lysine)

Structure monomer of 52 kDa (SDS-PAGE)

Specificity fructosyl-valyl-histidine (100), fructosyl-glycine (53), N ϵ -fructosyl-lysine (84)

Stabilizers EDTA, glutamate

Unit Definition One unit (U) is defined as the amount of enzyme which produces 1 μ mol 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