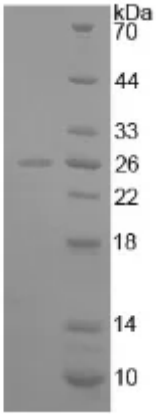
Active Superoxide Dismutase 3, Extracellular (SOD3)

Catalog#:PEM12197

概述（Summary）

别称（Alternative Names）	SOD-3; EC-SOD; Extracellular Superoxide Dismutase Cu-Zn
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Ser25-Thr251】
Accession #	O09164
表达宿主（Host）	E.coli
种属（Species）	Mus musculus (Mouse)
预测分子量（Predicted MW）	26.2 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Protect the extracellular space from toxic effect of reactive oxygen intermediates by converting superoxide radicals into hydrogen peroxide and oxygen.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

Calculation:

$$\text{SOD3 activity (U/mL)}=\frac{\frac{0.070-A325/\min}{0.070}\times 100\%}{50\%}\times 0.93/V\times N$$

Where:

0.070=pyrogallol autoxidation rate

A325/min= inhibition pyrogallol autoxidation rate of SOD3

0.93=total volume in cuvette

V=sample volume

N=dilution factor

Specific SOD3 activity (U/mg)=SOD3 activity/amount of SOD3 in 1mL.

The specific activity of recombinant mouse SOD3 is 273.8U/mg.

Extracellular superoxide dismutase [Cu-Zn] is an enzyme that in humans is encoded by the SOD3 gene. This gene encodes a member of the superoxide dismutase (SOD) protein family. SODs are antioxidant enzymes that catalyze the dismutation of two superoxide radicals into hydrogen peroxide and oxygen. According to the report, in a weakly alkaline buffer solution (pH=8.2) with N-tris (hydroxymethyl) amino methane-HCL, pyrogallol can occur autoxidation in the air, then SOD can inhibit this reaction. Thus, we use this way to measure the activity of recombinant mouse SOD3. The reaction was performed in adding 30μL 50mmol/L pyrogallol to 900μL 50mmol/L Tris-HCl in 1.5mL cuvette (1.0cm light path), rapidly mixing at 25℃,then read at 325nm (zero the spectrophotometer using 50mmol/L Tris-HCl), record the OD value every 30 second for 6 times. Control the pyrogallol autoxidation rate at 0.70 OD/min. After, adding various concentrations of recombinant of SOD3 to 900μL 50mmol/L Tris-HCl, incubated for 20min at 25℃, then adding 30μL 50mmol/L pyrogallol to each tube, rapidly mixing and read at 325nm, record the OD value every 30 second for 6 times. Under these conditions, the enzyme amount of 50% per minute inhibition of pyrogallol autooxidation is defined as a unit.

注意事项（Note）

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