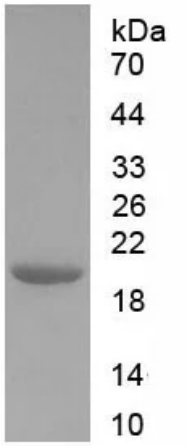
Active Superoxide Dismutase 1 (SOD1)

Catalog#:PEV12784

概述（Summary）

别称（Alternative Names）	ALS; ALS1; IPOA; Superoxide Dismutase 1, Soluble; Amyotrophic Lateral Sclerosis 1,Adult; 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）	【Ala2-Gln153】
Accession #	P04178
表达宿主（Host）	E.coli
种属（Species）	Sus scrofa; Porcine (Pig)
预测分子量（Predicted MW）	19.5 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 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 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Destroys radicals which are normally produced within the cells and which are toxic to biological systems.

电泳图（SDS-PAGE image）



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

活性图（Bioactivity image）

Calculation

$$\text{SOD1 activity（U/mg）} = \frac{\frac{0.070 - A325/\text{min}}{0.070} \times 100\%}{50\%} / M$$

Where：

0.070=pyrogallol autoxidation rate

A325/min= inhibition pyrogallol autoxidation rate of SOD1

M=mass of enzyme

Superoxide Dismutase 1 (SOD1) is an enzyme that in human is encoded by the SOD1 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. Acroding 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 measued the activity of recombinant pig SOD1. The reaction was performed in adding 8 μl 5 mmol/L pyrogallol to 200 μl 50mmol/L Tris-HCl, rapidly mixing at 25 ℃, then read at 325 nm (using 50mmol/L Tris-HCl as blank control) in kinetic mode for 3 minutes using a microplate reader controlling the pyrogallol autoxidation rate at 0.70 OD/min. Different concentrations of recombinant pig SOD1 were added into 200 μl 50 mmol/L Tris-HCl, incubated for 20 min at 25 ℃, then adding 8 μl 5 mmol/L pyrogallol to each well, rapidly mixing and read at 325 nm in kinetic mode for 3 minutes. Under these conditions, the enzyme amount of 50% inhibition of pyrogallol autooxidation per minute is defined as a unit. The specific activity of recombinant pig SOD1 is 593.8 U/mg.

注意事项（Note）

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