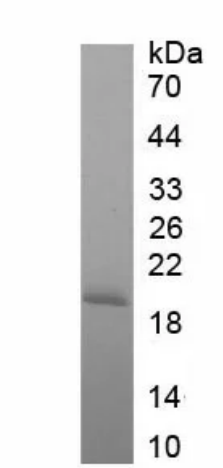
Active Superoxide Dismutase 1 (SOD1)

Catalog#:PEM12782

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 95% 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-Gln154】
Accession #	P08228
表达宿主（Host）	E.coli
种属（Species）	Mus musculus (Mouse)
预测分子量（Predicted MW）	17.0 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 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

Calculation

$$\text{SOD1 activity（U/ml）} = \frac{\frac{0.070 - A325/\text{min}}{0.070} \times 100\%}{50\%} \times 0.915 / V \times N$$

Where：

0.070=pyrogallol autoxidation rate
A325/min= inhibition pyrogallol autoxidation rate of SOD1
0.915= total volume in cuvette
V=sample volume
N=dilution factor

Specific SOD1 activity (U/mg)=SOD1 activity/amount of SOD1in 1ml.
The specific activity of recombinant mouse SOD1 is 374U/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. 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 mouse SOD1.The reaction was performed in adding 15μl 5mmol/L pyrogallol to 900μl 50mmol/L Tris-HCl in 1.5ml cuvette(1.0 cm light path),rapidly mixing at 25 ℃,then read at 325nm(zero the spectrophotometer using 50mmol/L Tris-HCl) , reacod 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 SOD1 to 900μl 50mmol/L Tris-HCl, incubated for 20min at 25 ℃, then adding 15μl 5mmol/L pyrogallol to each tube, rapidly mixing and read at 325nm, reacod 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）

For Research Use Only , Not for Diagnostic Use.