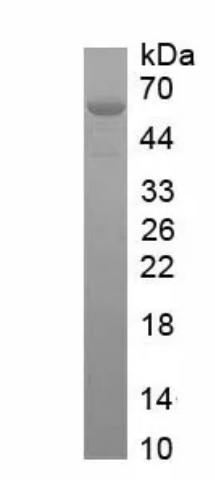
Active Catalase (CAT)

Catalog#:PEH12847

概述（Summary）

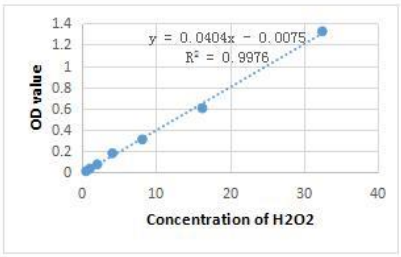
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Asp10-Asn507】
Accession #	P04040
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	60.4 kDa
制剂（Form）	Lyophilized from a 0.2 μm 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）	Occurs in almost all aerobically respiring organisms and serves to protect cells from the toxic effects of hydrogen peroxide. Promotes growth of cells including T-cells, B-cells, myeloid leukemia cells, melanoma cells, mastocytoma cells and normal and transformed fibroblast cells.

电泳图（SDS-PAGE image）



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

活性图（Bioactivity image）



Concentration of H_2O_2 (mM)	OD (405nm)
32.5	1.325
16.25	0.604
8.125	0.311
4.0625	0.181
2.03125	0.078
1.015625	0.038
0.5078125	0.013

Figure 1. The standard curve of H_2O_2

One unit of enzyme activity is defined as the 1μg of enzyme required to convert 1umol of H_2O_2 to H_2O in 1min at 37°C. The specific activity of recombinant human CAT is 53.8 umol/min/μg.

Catalase (CAT) is an antioxidant enzyme present in all aerobic organisms. It is known to catalyze H2O2 into water and oxygen in an energy-efficient manner in the cells exposed to environmental stress. As we know, H2O2 and (NH4)2MoO4 can produce a stable yellow product which has a absorbance at 405 nm. Thus, the recombinant human CAT activity was measured by its ability to hydrolyze H2O2 to H2O , the remaining H2O2 in the reaction was measured by (NH4)2MoO4. The reaction was performed in 60 mM phosphate buffer pH 7.4 (Assay Buffer), initiated by addition 100 μL of various concentrations of CAT (diluted by Assay Buffer) to 1 mL of 65 mM Substrate H2O2 (diluted by Assay Buffer). Incubated at 37℃ for 1min, then add 1 ml 200 mM (NH4)2MoO4. After 10 minutes at room temperature, read at a wavelength of 405 nm.

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.