abcam

Product datasheet

Recombinant human SOD2/MnSOD protein ab93946

2 References 1 Image

Description

Product name	Recombinant human SOD2/MnSOD protein
Biological activity	Specific activity is > 1,200 units/mg, in which one unit will inhibit the rate of reduction of cytochrome c by 50% in a coupled system, using xanthine and Xanthine oxidase at pH 7.8 at 25°C in a 1.5 ml reaction volume. **Activity Assay** Prepare a 1.5 ml reaction mix into a suitable container and pre-chill on ice before use: The final concentrations are 50mM potassium phosphate, 0.1mM ethylendiaminetetraacetic acid, 0.01mM cytochrome C, 0.05mM xanthine, 0.005 units xanthine oxidase. Equilibrate to 25°C and monitor at A550nm until the value is constant using a spectrophotometer. Add 50 ul of recombinant SOD protein in various concentrations (0.5 ug, 1 ug) in assay buffer. Mix by inversion and record the increase at A550nm for 5 minutes.
Purity	> 95 % SDS-PAGE. ab93946 was purified using conventional chromatography techniques.
Expression system	Escherichia coli
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MGSSHHHHHHSSGLVPRGSHMKHSLPDLPYDYGALEPHI NAQIMQLHHSK HHAAYVNNLNVTEEKYQEALAKGDVTAQIALQPALKFNGG GHINHSIFWT NLSPNGGGEPKGELLEAIKRDFGSFDKFKEKLTAASVGV QGSGWGWLGFN KERGHLQIAACPNQDPLQGTTGLIPLLGIDVWEHAYYLQYK NVRPDYLKA IWNVINWENVTERYMACKK

Specifications

Our **Abpromise guarantee** covers the use of **ab93946** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Mass Spectrometry
Mass spectrometry	MALDI-TOF
Form	Liquid

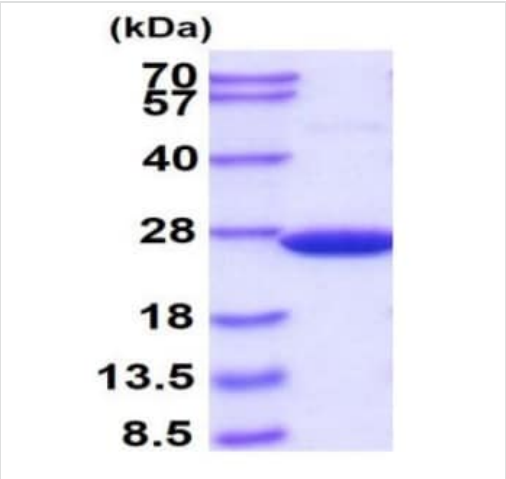
Preparation and Storage

Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. pH: 8.00 Constituents: 0.316% Tris HCl, 20% Glycerol (glycerin, glycerine) This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function	Destroys superoxide anion radicals which are normally produced within the cells and which are toxic to biological systems.
Involvement in disease	Genetic variation in SOD2 is associated with susceptibility to microvascular complications of diabetes type 6 (MVCD6) [MIM:612634]. These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis.
Sequence similarities	Belongs to the iron/manganese superoxide dismutase family.
Post-translational modifications	Nitrated under oxidative stress. Nitration coupled with oxidation inhibits the catalytic activity.
Cellular localization	Mitochondrion matrix.

Images



SDS-PAGE - Recombinant human SOD2/MnSOD protein (ab93946)

15% SDS-PAGE analysis of ab93946 (3µg)

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