

Mn SOD Polyclonal Antibody

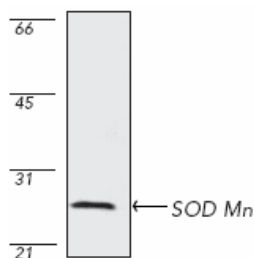
Product Specifications	
Catalog Number:	SOD-110
Host:	Rabbit
Species Reactivity:	Human, mouse, rat, bovine, canine, guinea pig, hamster, monkey, pig, rabbit, sheep, and <i>Xenopus</i>
Applications: <i>The optimal dilution for a specific application must be determined by the investigator</i>	WB: 1:1000 (Colorimetric)
Predicted m.w:	~25 kDa
Concentration:	See product label
Purification:	Protein A Affinity
Format:	PBS, pH 7.2, 0.09% azide, 50% glycerol
Storage: <i>Shipping conditions may differ from the recommended storage temperature</i>	Store at -20°C
Immunogen:	Human Mn SOD protein ¹
Related Products:	
900-157	SOD Activity Kit
SOD-111	Mn SOD Polyclonal Antibody
SOD-100	Cu/Zn SOD Polyclonal Antibody
SOD-101	Cu/Zn SOD Polyclonal Antibody
SOD-105	EC SOD Polyclonal Antibody

Background:

Superoxide dismutase (SOD) is responsible for the elimination of cytotoxic active oxygen by catalyzing the dismutation of the superoxide radical to oxygen and hydrogen peroxide¹⁻⁴. There are three SOD isoenzymes in mammalian cells: extracellular SOD (EC SOD, SOD-3); copper and zinc-containing SOD (Cu/Zn SOD, SOD-1); and manganese-containing SOD (Mn SOD, SOD-2). Mn SOD is an 80 kDa tetramer that contains Mn ion S and resides in the mitochondrial matrix. Mn SOD is a tumor necrosis factor (TNF)-inducible enzyme that protects cells from TNF-mediated apoptosis⁵ via superoxide anion detoxification, and the subsequent regulation of apoptosis through cytochrome c release and modulation of the redox state of the mitochondria⁶. Overexpression of this enzyme protects neurons from NMDA- and nitric oxide-induced neurotoxicity⁷.

References:

1. Kurobe, N., *et al.* (1991) *Biom Res.* **12**(2), 97-103.
2. Kurobe, N., *et al.* (1990) *Clin Chim Acta* **187**, 11-20.
3. Kurobe, N., *et al.* (1990) *Clin Chim Acta* **192**, 171-180.
4. Wong, G.H., *et al.* (1989) *Cell* **58**, 923-931.
5. Guegan, C., *et al.* (2000) *Brain Res.* **856**, 93-100.
6. Zhang, H.J., *et al.* (1999) *Cancer Res.* **59**, 6276-6283.
7. Gonzalez-Zulueta, M., *et al.* (1998) *J Neurosci.* **18**, 2040-2055.



Western blot analysis of human K562 cell lysate, probed with Mn SOD Polyclonal Antibody