



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# SOD-3 (m): 293T Lysate: sc-123712

## BACKGROUND

The superoxide dismutase family is composed of three metalloenzymes (SOD-1, SOD-2 and SOD-3) that catalyze the oxido-reduction of reactive oxygen species (ROS) such as superoxide anion. ROS are implicated in a wide range of degenerative processes, including Alzheimer's disease, Parkinson's disease and ischemic heart disease. Cu/Zn superoxide dismutase-1 (SOD-1) is a well characterized cytosolic scavenger of oxygen free radicals that requires copper and zinc binding to potentiate its enzymatic activity. The SOD-2 precursor is a 222 amino acid protein that is encoded by nuclear chromatin, synthesized in the cytosol and imported posttranslationally into the mitochondrial matrix. SOD-3, also designated extracellular superoxide dismutase (EC-SOD), is an extracellular zinc and copper binding protein that destroys radicals that are toxic to biological systems but that are normally produced within cells. SOD-3 is found in extracellular fluids such as lymph, plasma and synovial fluid.

## REFERENCES

- Levanon, D., et al. 1985. Architecture and anatomy of the chromosomal locus in human chromosome 21 encoding the Cu/Zn superoxide dismutase. *EMBO J.* 4: 77-84.
- Bewley, G.C. 1988. cDNA and deduced amino acid sequence of murine Cu/Zn superoxide dismutase. *Nucleic Acids Res.* 16: 2728.
- Beckman, J.S., et al. 1993. ALS, SOD and peroxynitrite. *Nature* 364: 584.
- Sandstrom, J., et al. 1994. 10-fold increase in human plasma extracellular superoxide dismutase content caused by a mutation in heparin-binding domain. *J. Biol. Chem.* 269: 19163-19166.
- Li, Y., et al. 1995. Dilated cardiomyopathy and neonatal lethality in mutant mice lacking manganese superoxide dismutase. *Nat. Genet.* 11: 376-381.
- Adachi, T., et al. 1996. An Arginine 213 to glycine mutation in human extracellular-superoxide dismutase reduces susceptibility to Trypsin-like proteinases. *J. Biochem.* 120: 184-188.
- Adachi, T., et al. 1996. Substitution of glycine for Arginine 213 in extracellular-superoxide dismutase impairs affinity for heparin and endothelial cell surface. *Biochem. J.* 313235-313239.
- Singh, R.J., et al. 1998. Reexamination of the mechanism of hydroxyl radical adducts formed from the reaction between familial amyotrophic lateral sclerosis-associated Cu/Zn superoxide dismutase mutants and H<sub>2</sub>O<sub>2</sub>. *Proc. Natl. Acad. Sci. USA* 95: 6675-6680.

## CHROMOSOMAL LOCATION

Genetic locus: Sod3 (mouse) mapping to 5 C1.

## PRODUCT

SOD-3 (m): 293T Lysate represents a lysate of mouse SOD-3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## APPLICATIONS

SOD-3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive SOD-3 antibodies. Recommended use: 10-20 µl per lane.

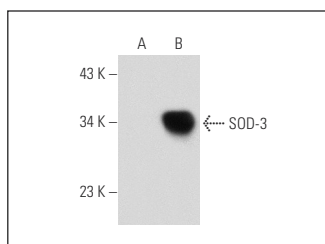
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

SOD-3 (A-11): sc-271170 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse SOD-3 expression in SOD-3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

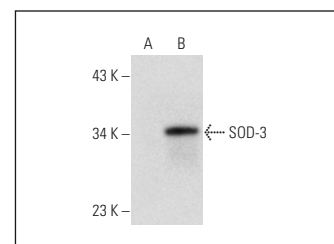
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



SOD-3 (A-11): sc-271170. Western blot analysis of SOD-3 expression in non-transfected: sc-117752 (A) and mouse SOD-3 transfected: sc-123712 (B) 293T whole cell lysates.



SOD-3 (A-11): sc-271170. Western blot analysis of SOD-3 expression in non-transfected: sc-117752 (A) and mouse SOD-3 transfected: sc-123712 (B) 293T whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.