

Anti-EC SOD

Catalog# SPC-124D

Size: 100µg

PO Box 55036, Cadboro Bay
3825 Cadboro Bay Road,
Victoria, BC, V8N 4G0, Canada

This product is for *in vitro* research use only and is not intended for use in humans or animals

StressMarq

Biosciences Inc.

Orders • sales@stressmarq.com
Tel: • +1 250 294 9065
Fax: • +1 250 294 9025
Email • info@stressmarq.com
Web • www.stressmarq.com

Product	Rabbit anti-EC SOD antibody polyclonal
Clone	N/A
Immunogen	Peptide corresponding to AA 227-236 of human EC SOD
Host and Subclass	Rabbit
Cited Applications	WB
Specificity	Identifies a band ~35kD on WB
Species cross-reactivity	Human, mouse, rat
Format	PBS pH 7.4; 50% glycerol, 0.09% azide. Peptide affinity purified.
Concentration and working dilution	1mg/ml; 1:1000 for WB
Storage and stability	-20°C; 1 year+; shipped on cold packs or ambient

homotetramer, with a mass of 30 kDa and it exists only in the extra-cellular space (6). SOD3 can also be distinguished by its heparin-binding capacity (1).

Selected References

1. Adachi T., *et al.* (1992) *Clin Chim Acta.* 212: 89-102.
2. Barrister J.V., *et al.* (1987). *Crit. Rev. Biochem.* 22:111-180.
3. Furukawa Y., and O'Halloran T. (2006) *Antioxidants & Redox Signaling.* 8(5): 6.
4. Gao B., *et al.* (2003) *Am J Physiol Lung Cell Mol Physiol* 284: L917-L925.
5. Hassan H.M. (1988) *Free Radical Biol. Med.* 5: 377-385.
6. Wispe J.R., *et al.* (1989) *BBA.* 994: 30-36.
7. Regan, E. *et al.* (2005) *Arthritis & Rheumatism* 52(11): 3479-3491

Scientific Background

Superoxide dismutase (SOD) is an endogenously produced intracellular enzyme present in almost every cell in the body (3). It works by catalyzing the dismutation of the superoxide radical O_2^- to O_2 and H_2O_2 , which are then metabolized to H_2O and O_2 by catalase and glutathione peroxidase (2, 5). In general, SODs play a major role in antioxidant defense mechanisms (4). There are three types of SOD in mammalian cells. One form (SOD1) contains Cu and Zn ions as a homodimer and exists in the cytoplasm. The two subunits of 16 kDa each are linked by two cysteines forming an intra-subunit disulphide bridge (3). The second form (SOD2) is a manganese containing enzyme and resides in the mitochondrial matrix. It is a homotetramer of 80 kDa. The third form (SOD3 or EC-SOD) is like SOD1 in that it contains Cu and Zn ions, however it is distinct in that it is a

Certificate of Analysis

1 µg/mL of SPC-124 was sufficient for detection of ECSOD in 20 µg of Hela lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

Material Safety Data Sheet

Anti-EC SOD (Polyclonal Antibody) SPC-124

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The below information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. StressMarq shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalogue for additional terms and conditions of sale.

Hazardous Ingredients

The physical, chemical and toxicological properties of these components have not been fully investigated. It is recommended that all laboratory personnel follow standard laboratory safety procedures when handling this product. Safety procedures should include wearing OSHA approved safety glasses, gloves and protective clothing. Direct physical contact with this product should be avoided.

<u>Known Hazardous Components</u>	<u>CAS Number</u>	<u>Percent</u>
Sodium Azide	26628-22-8	0.09

Physical Data

This product consists of rabbit immunoglobulin containing 0.09% sodium azide in 50% glycerol shipped on gel packs. The physical properties of this product have not been investigated thoroughly.

Fire and Explosion Hazard and Reactivity Data

NOT APPLICABLE

Toxicological Properties

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

Spill and Leak Procedures

Observe all federal, state and local environmental regulations.

- Wear protective equipment.
- Absorb on sand or vermiculite and place in closed containers for disposal.
- Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
- If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.

Authorized: StressMarq Biosciences Inc.
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