

## Product Datasheet

### SOD (Mn) Antibody: Biotin (orb151462)

<b>Description</b>	Rabbit polyclonal to SOD (Biotin). Superoxide dismutase (SOD) is an endogenously produced intracellular enzyme present in almost every cell in the body. 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. There are two main 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. 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 homotetramer, with a mass of 30 kDa and it exists only in the extra-cellular space. SOD3 can also be distinguished by its heparin-binding capacity..
<b>Species/Host</b>	Rabbit
<b>Reactivity</b>	Bovine, Canine, Frog, Gallus, Guinea pig, Hamster, Human, Monkey, Mouse, Porcine, Rabbit, Rat, Rodent, Sheep
<b>Conjugation</b>	Biotin
<b>Tested Applications</b>	ELISA, ICC, IF, IHC, WB
<b>Immunogen</b>	Recombinant Human Mn SOD Protein
<b>Target</b>	SOD2
<b>Preservatives</b>	136.36mM Ethanolamine, and 9.55mM Sodium Bicarbonate in 95.45% PBS
<b>Concentration</b>	1 mg/ml
<b>Storage</b>	Conjugated antibodies should be stored according to the product label
<b>Note</b>	For research use only

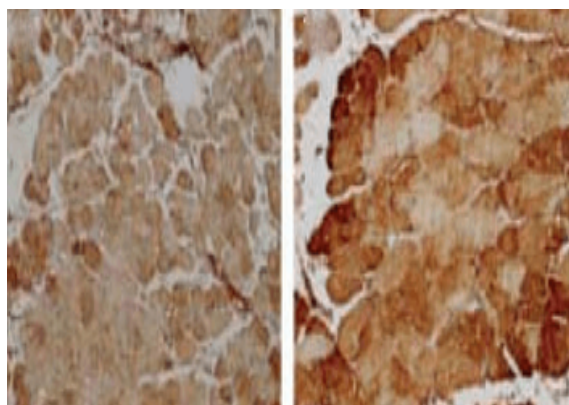
#### Biorbyt Ltd.

7 Signet Court, Swann's Road,  
Cambridge, CB5 8LA, United Kingdom  
Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)  
Phone: [+44 \(0\) 1223 859-353](tel:+441223859353) | Fax: [+1 \(415\) 651-8558](tel:+14156518558)

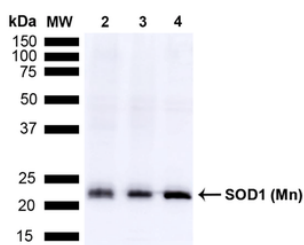
#### Biorbyt LLC.

68 TW Alexander Drive,  
Durham, NC, 27713, United States  
Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)  
Phone: [+1 \(415\) 906-5211](tel:+14159065211) | Fax: [+1 \(415\) 651-8558](tel:+14156518558)

<b>Application notes</b>	0.2 µg/ml of SPC-118 was sufficient for detection of Mn SOD in 20 µg of rat brain tissue extract by colorimetric immunoblot analysis using Goat anti-mouse IgG:AP as the secondary antibody.
<b>Clonality</b>	Polyclonal
<b>MW</b>	25kDa
<b>Uniprot ID</b>	<b>P04179</b>
<b>NCBI</b>	<b>NP_000627.2</b>
<b>Entrez</b>	<b>6648</b>
<b>Dilution Range</b>	WB (1:5000), IHC (1:100)
<b>Expiration Date</b>	12 months from date of receipt.



Immunohistochemistry analysis using Rabbit Anti-SOD2 Polyclonal Antibody. Tissue: muscle fibres. Species: Rat. Primary Antibody: Rabbit Anti-SOD2 Polyclonal Antibody at 1:100. Left: Untreated, Right: treated with 3mmol\*kg<sup>-1</sup> NAC.



Western blot analysis of Mouse Brain, Rat Brain, and Rat Brain Membrane showing detection of 24.7kDa SOD (Mn) protein using Rabbit Anti-SOD (Mn) Polyclonal Antibody. Lane 1: MW Ladder. Lane 2: Mouse Brain (15 µg). Lane 3: Rat Brain (15 µg). Lane 4: Rat Brain Membrane (15 µg). Block: 5% Skim Milk powder in TBST. Primary Antibody: Rabbit Anti-SOD (Mn) Polyclonal Antibody at 1:1000 for O/N at 4°C. Secondary Antibody: Goat anti-rabbit IgG:HRP at 1:5000 for 1 hour at RT with shaking. Color Development: Chemiluminescent for HRP (Moss) for 5 min in RT. Predicted/Observed Size: 24.7kDa.

#### **Biorbyt Ltd.**

7 Signet Court, Swann's Road,  
Cambridge, CB5 8LA, United Kingdom  
Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)  
Phone: [+44 \(0\) 1223 859-353](tel:+44201223859353) | Fax: [+1 \(415\) 651-8558](tel:+14156518558)

#### **Biorbyt LLC.**

68 TW Alexander Drive,  
Durham, NC, 27713, United States  
Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)  
Phone: [+1 \(415\) 906-5211](tel:+14159065211) | Fax: [+1 \(415\) 651-8558](tel:+14156518558)