

Product Datasheet

SOD2 (Mn) Antibody (FITC) (orb151446)

Catalog Number	orb151446
Category	Antibodies
Description	Rabbit polyclonal to SOD (FITC). 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..
Target	SOD2 (Mn)
Clonality	Polyclonal
Species/Host	Rabbit
Conjugation	FITC
Reactivity	Bovine, Canine, Drosophila, Fish, Frog, Gallus, Guinea pig, Hamster, Human, Invertebrate, Monkey, Mouse, Porcine, Rabbit, Rat, Rodent, Sheep
Concentration	1 mg/ml
Buffer/Preservatives	640.91mM DMSO, 136.36 mM Ethanolamine, 126.89 mM chlorides, 9.09mM phosphates, 9.09mM $NaHCO_3$

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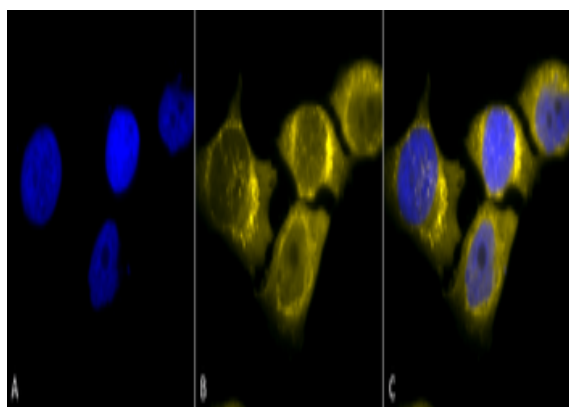
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Purification	Protein A Purified
Immunogen	Recombinant Rat Mn SOD Protein
UniProt ID	P07895
MW	25kDa
Tested applications	ELISA, ICC, IF, IHC, IP, WB
Dilution range	WB (1:5000), IHC (1:100), ICC/IF (1:120)
Application notes	0.5 µg/ml of SPC-117 was sufficient for detection of Mn SOD in 20 µg of rat brain tissue extract by colorimetric immunoblot analysis using Goat anti-rabbit IgG:AP as the secondary antibody.
Specificity	Detects ~25kDa.
Storage	Conjugated antibodies should be stored according to the product label
Note	For research use only
Entrez	24787
NCBI	NP_058747.1



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-SOD (Mn) Polyclonal Antibody. Tissue: Cervical cancer cell line (HeLa). Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (Mn) Polyclonal Antibody at 1:120 for 12 hours at 4°C. Secondary Antibody: R-PE Goat Anti-Rabbit (yellow) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Mitochondrion matrix. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD (Mn) Antibody. (C) Composite.

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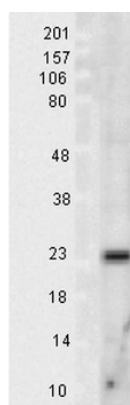
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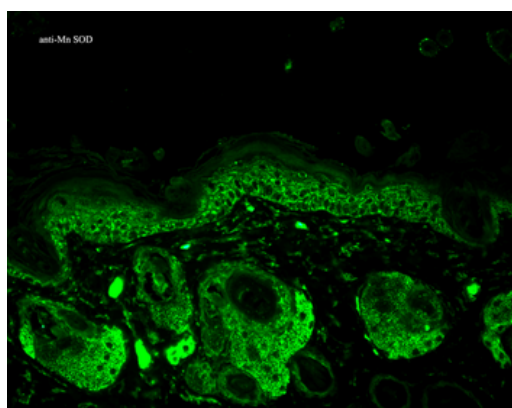
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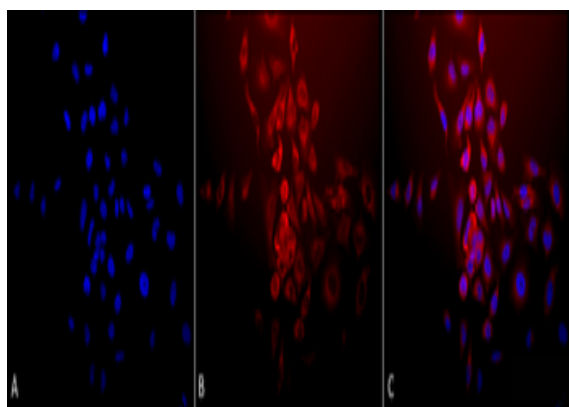
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Western blot analysis of Rat Tissue lysates showing detection of SOD2 protein using Rabbit Anti-SOD2 Polyclonal Antibody. Load: 15 µgprotein. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Rabbit Anti-SOD2 Polyclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Donkey Anti-Rabbit IgG: HRP for 1 hour at RT.



Immunohistochemistry analysis using Rabbit Anti-SOD2 Polyclonal Antibody. Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative Solution. Primary Antibody: Rabbit Anti-SOD2 Polyclonal Antibody at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:50 for 1 hour at RT. Localization: Mitochondrion matrix.



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-SOD (Mn) Polyclonal Antibody. Tissue: Cervical cancer cell line (HeLa). Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (Mn) Polyclonal Antibody at 1:120 for 12 hours at 4°C. Secondary Antibody: APC Goat Anti-Rabbit (red) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Mitochondrion matrix. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD (Mn) Antibody. (C) Composite.

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