

Product Datasheet

SOD1 (Cu/Zn) Antibody (FITC) (orb151412)

Catalog Number	orb151412
Category	Antibodies
Description	<p>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 O₂⁻ to O₂ and H₂O₂, which are then metabolized to H₂O and O₂ 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..</p>
Target	SOD1 (Cu/Zn)
Clonality	Polyclonal
Species/Host	Rabbit
Conjugation	FITC
Reactivity	Bovine, Fungi, Human, Mouse, Rat
Concentration	1 mg/ml
Buffer/Preservatives	640.91mM DMSO, 136.36 mM Ethanolamine, 126.89 mM chlorides, 9.09mM phosphates, 9.09mM NaHCO ₃
Purification	Protein A Purified

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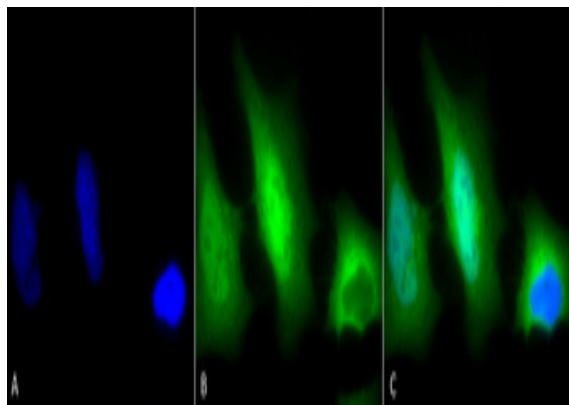
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Immunogen	Synthetic Rat Cu/Zn SOD Peptide
UniProt ID	P07632
MW	19kDa
Tested applications	ELISA, ICC, IF, IHC, IP, WB
Dilution range	WB (1:2000), ICC/IF (1:120)
Application notes	0.5 µg/ml of SPC-115 was sufficient for detection of Cu/Zn SOD in 20 µg of rat brain tissue extract by colorimetric immunoblot analysis using Goat anti-rabbit IgG:AP as the secondary antibody.
Specificity	Detects ~23kDa (human) and ~19kDa (other species).
Storage	Conjugated antibodies should be stored according to the product label
Note	For research use only
Entrez	24786
NCBI	NP_058746.1



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

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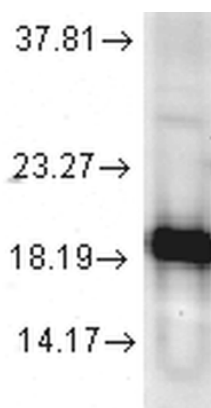
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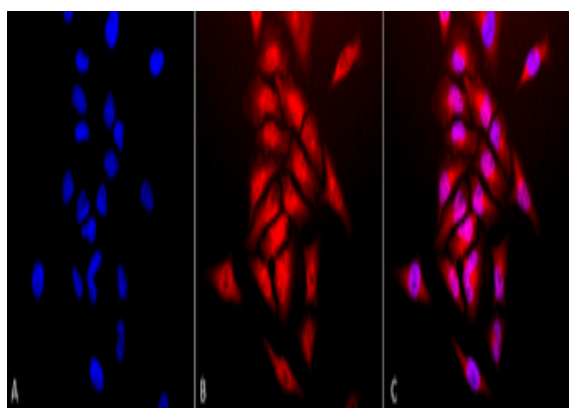
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Western blot analysis of Human Cell line lysates showing detection of SOD1 protein using Rabbit Anti-SOD1 Polyclonal Antibody. Load: 15 µgprotein. Block: 1.5% BSA. Primary Antibody: Rabbit Anti-SOD1 Polyclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Donkey Anti-Rabbit IgG: HRP for 1 hour at RT.



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-SOD (Cu/Zn) Polyclonal Antibody. Tissue: Cervical cancer cell line (HeLa). Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (Cu/Zn) 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: Cytoplasm. Nucleus. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD (Cu/Zn) Antibody. (C) Composite.

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