

**Superoxide Dismutase 4 (SOD-4) Antibody (3A1)**  
**Mouse Monoclonal Antibody**  
**Catalog # ABV11164****Specification**

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**Superoxide Dismutase 4 (SOD-4) Antibody (3A1) - Product Information**

Application	WB
Primary Accession	<a href="#">O14618</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG 2a
Calculated MW	29041

**Superoxide Dismutase 4 (SOD-4) Antibody (3A1) - Additional Information****Gene ID** 9973

Positive Control	WB analysis of HeLa and Jurkat cell lysates. IHC analysis : normal human lymphoid tissue, normal human tonsillar tissue
Application & Usage	Western blot: 1:2000, IP: 2 µl, IHC-P, ELISA.

**Other Names**

Superoxide dismutase, SOD4.

**Target/Specificity**

SOD4

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

100 µl of antibody in HEPES with 0.15 M NaCl, 0.01 % BSA, 0.03 % sodium azide, and 50 % glycerol

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

**Background Descriptions****Precautions**

Superoxide Dismutase 4 (SOD-4) Antibody (3A1) is for research use only and not for use in diagnostic or therapeutic procedures.

### Superoxide Dismutase 4 (SOD-4) Antibody (3A1) - Protein Information

**Name** CCS ([HGNC:1613](#))

**Function**

Delivers copper to copper zinc superoxide dismutase (SOD1).

**Cellular Location**

Cytoplasm.

**Tissue Location**

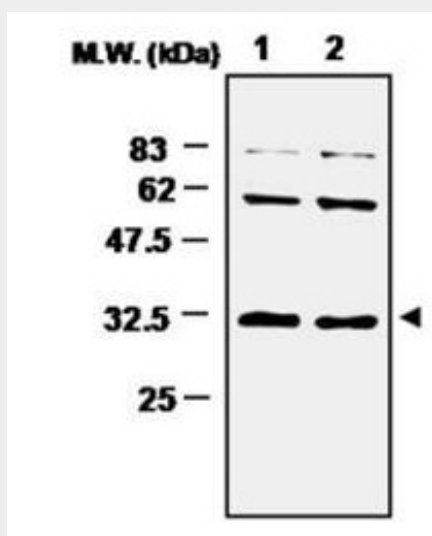
Ubiquitous.

### Superoxide Dismutase 4 (SOD-4) Antibody (3A1) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Superoxide Dismutase 4 (SOD-4) Antibody (3A1) - Images



WB analysis of cell lysates. Lane 1: HeLa cells, Lane 2: Jurkat cells

### Superoxide Dismutase 4 (SOD-4) Antibody (3A1) - Background

Superoxide dismutase (SOD) is an antioxidant enzyme involved in the defense system against reactive oxygen species (ROS). SOD catalyzes the dismutation reaction of superoxide radical anion ( $O_2^-$ ) to hydrogen peroxide, which is then catalyzed to innocuous  $O_2$  and  $H_2O$  by glutathione peroxidase and catalase. Several classes of SOD have been identified. These include intracellular copper, zinc SOD (Cu, Zn-SOD/SOD-1), mitochondrial manganese SOD (Mn-SOD/SOD-2) and extracellular Cu, Zn-SOD (EC-SOD/SOD-3). SOD1 is found in all eukaryotic species as a homodimeric 32 kDa enzyme containing one each of Cu and Zn ion per subunit. The manganese containing 80 kDa tetrameric enzyme SOD2, is located in the mitochondrial matrix in close proximity to a primary endogenous source of superoxide, the mitochondrial respiratory chain. SOD3 is a heparin-binding multimer of disulfide-linked dimers, primarily expressed in human lungs, vessel walls and airways. SOD4 is a copper chaperone for superoxide dismutase (CCS), which specifically delivers Cu to copper/zinc superoxide dismutase. CCS may activate copper/zinc superoxide dismutase through direct insertion of the Cu cofactor. SOD4 delivers copper to copper zinc superoxide dismutase (SOD1).