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# Superoxide Dismutase 3 (SOD-3) Antibody (1H12)

**Mouse Monoclonal Antibody**
**Catalog # ABV11163**

## Specification

### Superoxide Dismutase 3 (SOD-3) Antibody (1H12) - Product Information

| | |
|---|---|
| Application | **WB, IHC, E, IP** |
| Primary Accession | P08294 |
| Reactivity | **Human** |
| Host | **Mouse** |
| Clonality | **Monoclonal** |
| Isotype | **Mouse IgG 2b** |
| Calculated MW | **25851** |

### Superoxide Dismutase 3 (SOD-3) Antibody (1H12) - Additional Information

**Gene ID** 6649

| | |
|---|---|
| Positive Control | **WB analysis: BOSC23 lysates, IHC analysis : normal human rectal tissue, normal human Kidney tissue** |
| Application & Usage | **Western blot: 1:2000, IP: 1 µl, IHC-P, ELISA.** |

**Other Names**
Superoxide dismutase, SOD3.

**Target/Specificity**
SOD3

**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 3 (SOD-3) Antibody (1H12) is for research use only and not for use in

diagnostic or therapeutic procedures.

## Superoxide Dismutase 3 (SOD-3) Antibody (1H12) - Protein Information

**Name** SOD3

**Function**
Protect the extracellular space from toxic effect of reactive oxygen intermediates by converting superoxide radicals into hydrogen peroxide and oxygen.

**Cellular Location**
Secreted, extracellular space. Golgi apparatus, trans-Golgi network {ECO:0000250|UniProtKB:O09164}. Note=99% of EC-SOD is anchored to heparan sulfate proteoglycans in the tissue interstitium, and 1% is located in the vasculature in equilibrium between the plasma and the endothelium

**Tissue Location**
Expressed in blood vessels, heart, lung, kidney and placenta. Major SOD isoenzyme in extracellular fluids such as plasma, lymph and synovial fluid

## Superoxide Dismutase 3 (SOD-3) Antibody (1H12) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Superoxide Dismutase 3 (SOD-3) Antibody (1H12) - Images

## Superoxide Dismutase 3 (SOD-3) Antibody (1H12) - 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 (O2-) to hydrogen peroxide, which is then catalyzed to innocuous O2 and H2O 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. SOD3 protects the extracellular space from toxic effect of reactive oxygen intermediates by converting superoxide radicals into hydrogen peroxide and oxygen.