

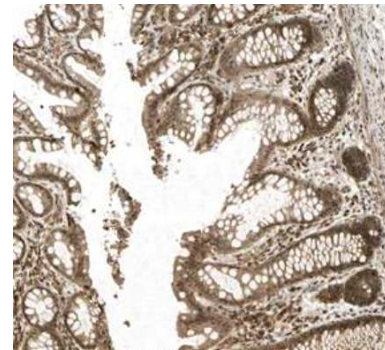
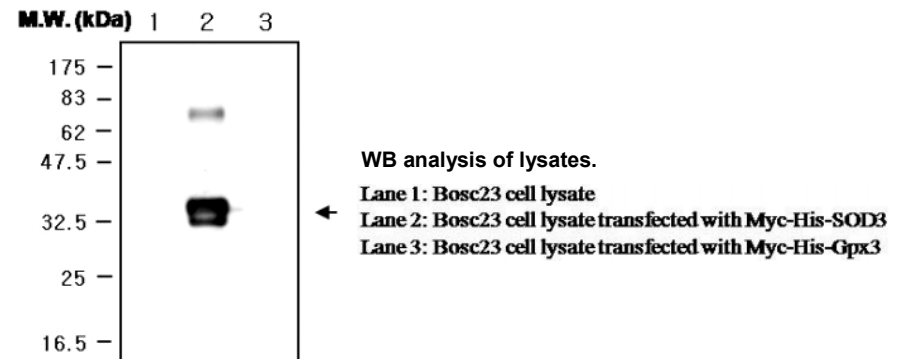
# Superoxide Dismutase 3 (1H12) Monoclonal Antibody

<b>ALTERNATE NAMES:</b>	Superoxide dismutase, SOD3.
<b>CATALOG #:</b>	6170-100
<b>AMOUNT:</b>	100 µl
<b>HOST:</b>	Mouse
<b>ISOTYPE:</b>	IgG2b
<b>IMMUNOGEN:</b>	Recombinant human protein purified from E.coli
<b>PURIFICATION:</b>	Ammonium sulphate precipitation
<b>FORM:</b>	Liquid
<b>FORMULATION:</b>	100 µl of antibody in HEPES with 0.15 M NaCl, 0.01 % BSA, 0.03 % sodium azide, and 50 % glycerol
<b>SPECIES REACTIVITY:</b>	Human
<b>STORAGE CONDITIONS:</b>	Store for 1 year at -20°C from date of shipment. Avoid repeated freeze/thaw cycles.

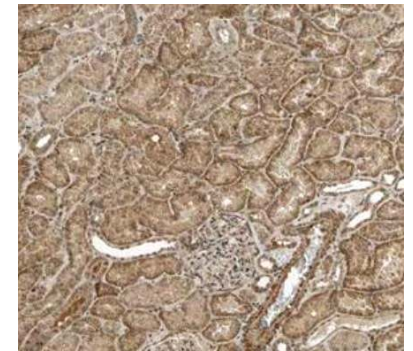
**DESCRIPTION:** Superoxide dismutase (SOD) is an antioxidant enzyme involved in the defense system against reactive oxygen species (ROS). SOD catalyzes the dismutation reaction of superoxide radical anion (O<sub>2</sub><sup>-</sup>) to hydrogen peroxide, which is then catalyzed to innocuous O<sub>2</sub> and H<sub>2</sub>O 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.

**APPLICATION:** Western blot: 1:2000, IP: 1 µl, IHC-P, ELISA.

**Note:** This information is only intended as a guide. The optimal dilutions must be determined by the user



IHC analysis of normal human rectal tissue.  
(Formalin fixed paraffin embedded)



IHC analysis of normal human Kidney tissue  
(Formalin fixed paraffin embedded)

## RELATED PRODUCTS:

- Superoxide Dismutase 1 (72B1) Monoclonal Antibody (**Cat. No. 6168-100**)
- Superoxide Dismutase 2 (2A1) Monoclonal Antibody (**Cat. No. 6169-100**)
- Superoxide Dismutase 4 (3A1) Monoclonal Antibody (**Cat. No. 6171-100**)
- Superoxide Dismutase (SOD) Activity Assay Kit (**Cat. No. K335-100**)
- Superoxide Dismutase, human recombinant (**Cat. No. 4802-50**)
- SOD2, human recombinant (**Cat. No. 6360-100**)
- Bacterial Recombinant SODA (**Cat. No. 6361-100**)
- SOD1 Antibody (**Cat. No. 3458-100**)
- SOD1 Blocking Peptide (**Cat. No. 3458BP-50**)
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**FOR RESEARCH USE ONLY! Not to be used on humans.**