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Tel: 858.875.1900 Fax: 858.875.1999

Anti-SOD3 Antibody
Catalog # ABO11203

Specification

Anti-SOD3 Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P08294
Host	**Rabbit**
Reactivity	**Human**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Extracellular superoxide dismutase[Cu-Zn](SOD3) detection. Tested with WB, IHC-P, IHC-F, ICC in Human.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-SOD3 Antibody - Additional Information

Gene ID 6649

Other Names
Extracellular superoxide dismutase [Cu-Zn], EC-SOD, 1.15.1.1, SOD3

Calculated MW
25851 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat

Immunocytochemistry , 0.5-1 µg/ml, Human, -
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml, Human, -
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization
Secreted, extracellular space. 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 Specificity
Expressed in blood vessels, heart, lung, kidney and placenta. Major SOD isoenzyme in extracellular fluids such as plasma, lymph and synovial fluid.

Protein Name
Extracellular superoxide dismutase[Cu-Zn]

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human SOD3 (41-56aa KVTEIWQEVMQRRDDD).

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Sequence Similarities
Belongs to the Cu-Zn superoxide dismutase family.

Anti-SOD3 Antibody - 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

Anti-SOD3 Antibody - 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

Anti-SOD3 Antibody - Images

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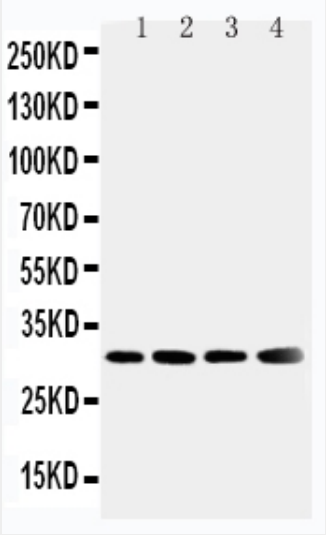
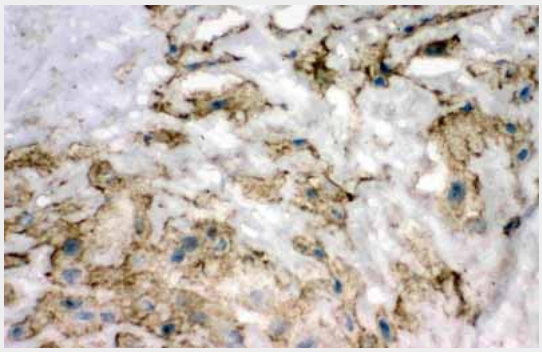


Anti-SOD3 antibody, ABO11203, Western blottingLane 1: Human Placenta Tissue LysateLane 2: A549 Cell LysateLane 3: MM231 Cell LysateLane 4: MCF-7 Cell Lysate



Anti-SOD3 antibody, ABO11203, IHC(F)IHC(F): Human Placenta Tissue

Anti-SOD3 Antibody - Background

SOD3(SUPEROXIDE DISMUTASE 3) also called SUPEROXIDE DISMUTASE, EXTRACELLULAR, EC-SOD, and Cu-Zn, is an enzyme that in humans is encoded by the SOD3 gene. This gene encodes a member of the superoxide dismutase(SOD) protein family. SODs are antioxidant enzymes that catalyze the dismutation of two superoxide radicals into hydrogen peroxide and oxygen. Hendrickson et al.(1990) mapped the SOD3 gene to 4pter-q21 by a study of somatic cell hybrids. Stern et al.(2003) narrowed the assignment to 4p15.3-p15.1 by somatic cell and radiation hybrid analysis, linkage mapping, and FISH. The product of this gene is though to protect the brain, lungs, and other tissues from oxidative stress. The protein is secreted into the extracellular space and forms a glycosylated homotetramer that is anchored to the extracellular matrix(ECM) and cell surfaces through an interaction with heparan sulfate proteoglycan and collagen. A fraction of the protein is cleaved near the C-terminus before secretion to generate circulating tetramers that do not interact with the ECM.