

**Anti-SOD3 Picoband Antibody**  
Catalog # ABO12963**Specification****Anti-SOD3 Picoband Antibody - Product Information**

Application	IHC
Primary Accession	<a href="#">P08294</a>
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for SOD3 detection. Tested with IHC-P in Human

**Reconstitution**

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

**Anti-SOD3 Picoband Antibody - Additional Information**

**Gene ID** 6649

**Other Names**

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

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml<br>

**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.

**Contents**

Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence of human SOD3 (WTGEDSAEPNSDSA EWIRDMYAKVTEIWQEV MQRRDDD).

**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.

## Anti-SOD3 Picoband 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 Picoband 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 Cytometry](#)
- [Cell Culture](#)

## Anti-SOD3 Picoband Antibody - Images

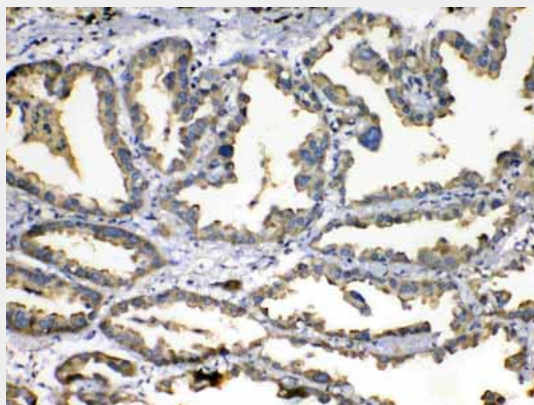


Figure 1. IHC analysis of SOD3 using anti-SOD3 antibody (ABO12963). SOD3 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was

blocked with 10% goat serum. The tissue section was then incubated with 1½g/ml rabbit anti-SOD3 Antibody (ABO12963) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

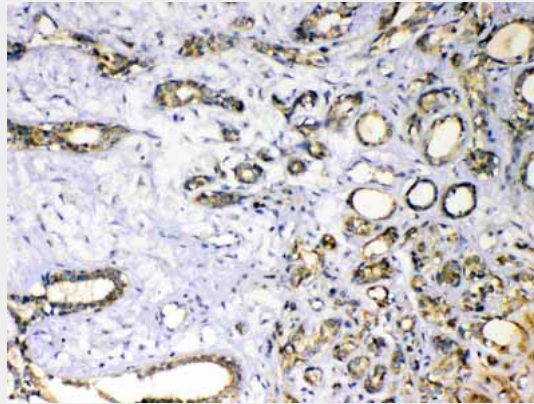


Figure 2. IHC analysis of SOD3 using anti-SOD3 antibody (ABO12963).SOD3 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1½g/ml rabbit anti-SOD3 Antibody (ABO12963) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

#### **Anti-SOD3 Picoband 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 thought 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.