BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Superoxide Dismutase 3/SOD3 Antibody Picoband®

Catalog Number: PA1899

About SOD3

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.

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Overview

Product Name	Anti-Superoxide Dismutase 3/SOD3 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-Superoxide Dismutase 3/SOD3 Antibody catalog # PA1899. Tested in IHC, IHC-F, ICC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, IHC-F, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P08294

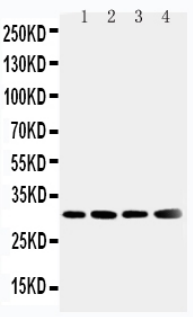
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Technical Details

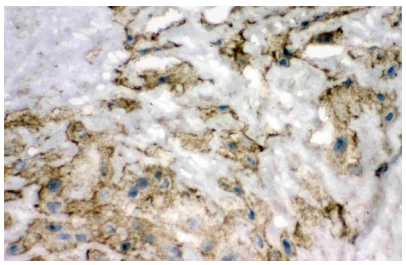
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human SOD3.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Immunocytochemistry, 0.5-1ug/ml, Human, Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human, Western blot, 0.1-0.5ug/ml, Human

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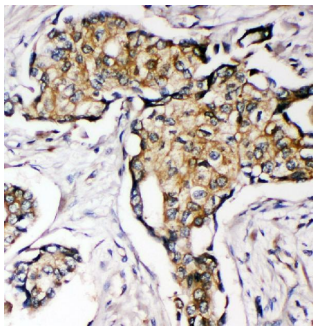
Anti-Superoxide Dismutase 3/SOD3 Antibody Picoband® (PA1899) Images



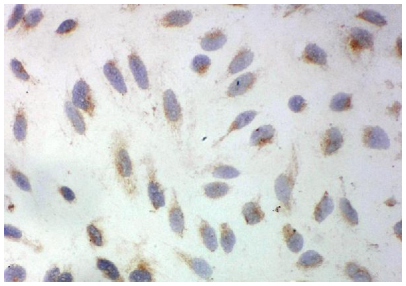
Anti-SOD3 antibody, PA1899, Western blottingLane 1: Human Placenta Tissue LysateLane 2: A549 Cell LysateLane 3: MM231 Cell LysateLane 4: MCF-7 Cell Lysate



Anti-SOD3 antibody, PA1899, IHC(F)IHC(F): Human Placenta Tissue



IHC analysis of SOD3 using anti-SOD3 antibody (PA1899). 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 1ug/ml rabbit anti-SOD3 Antibody (PA1899) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



ICC analysis of SOD3 using anti-SOD3 antibody (PA1899). SOD3 was detected in immunocytochemical section of HELA cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 1ug/ml rabbit anti-SOD3 Antibody (PA1899) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

3 Publications Citing This Product

1. PubMed ID: 24571896, Wu Z, Ming Y, Zhang Z, Wu J, Wu Z, Yao S. Chin Med J (Engl). 2014;127(5):968-70. Edaravone Rescues The Lung By Inhibiting Lipid Peroxidation And Pro-Inflammatory Cytokines In A Rat Model.

2. PubMed ID: 22489155, Long Sh, Yu Zq, Shuai L, Guo Yl, Duan Dl, Xu Xy, Li Xd. Int J Mol Sci. 2012;13(3):3354-65. Doi: 10.3390/Ijms13033354. Epub 2012 Mar 12. The Hypoglycemic Effect Of The Kelp On Diabetes Mellitus Model Induced By Alloxan In Rats.

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3. PubMed ID: 28656209, Hydrogen sulfide reduced renal tissue fibrosis by regulating autophagy in diabetic rats

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Anti-Superoxide Dismutase 3/SOD3 Antibody

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