BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Superoxide Dismutase 3/EC-SOD/Sod3 Antibody Picoband®

Catalog Number: A01784-3

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 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.

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Overview

Product Name	Anti-Superoxide Dismutase 3/EC-SOD/Sod3 Antibody Picoband®
Reactive Species	Mouse
Description	Boster Bio Anti-Superoxide Dismutase 3/EC-SOD/Sod3 Antibody Picoband® catalog # A01784-3. Tested in ELISA, Flow Cytometry, IHC, WB applications. This antibody reacts with Mouse. 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	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4.
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	O09164

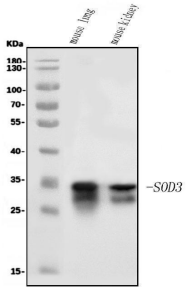
Technical Details

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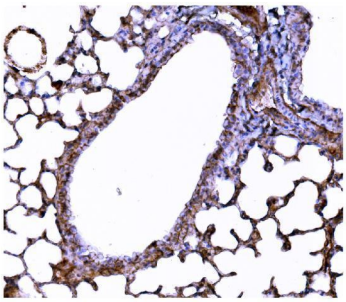
Immunogen	E.coli-derived mouse Sod3 recombinant protein (Position: V36-L101).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	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	Western blot, 0.25-0.5ug/ml, Mouse Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Mouse Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Mouse ELISA, 0.1-0.5ug/ml, - Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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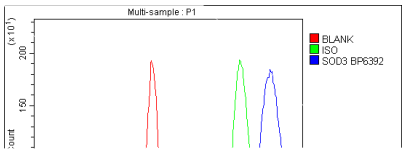
Anti-Superoxide Dismutase 3/EC-SOD/Sod3 Antibody Picoband® (A01784-3) Images



Western blot analysis of Superoxide Dismutase 3/EC-SOD/Sod3 using anti-Superoxide Dismutase 3/EC-SOD/Sod3 antibody (A01784-3). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: mouse lung tissue lysates, Lane 2: mouse kidney tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Superoxide Dismutase 3/EC-SOD/Sod3 antigen affinity purified polyclonal antibody (Catalog # A01784-3) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Superoxide Dismutase 3/EC-SOD/Sod3 at approximately 32 kDa. The expected band size for Superoxide Dismutase 3/EC-SOD/Sod3 is at 32 kDa.



IHC analysis of Superoxide Dismutase 3/EC-SOD/Sod3 using anti-Superoxide Dismutase 3/EC-SOD/Sod3 antibody (A01784-3). Superoxide Dismutase 3/EC-SOD/Sod3 was detected in a paraffin-embedded section of mouse lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Superoxide Dismutase 3/EC-SOD/Sod3 Antibody (A01784-3) 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.



Flow Cytometry analysis of HEPA1-6 cells using anti-Superoxide Dismutase 3/EC-SOD/Sod3 antibody (A01784-3). Overlay histogram showing HEPA1-6 cells stained with A01784-3 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-Superoxide Dismutase 3/EC-SOD/Sod3 Antibody (A01784-3, 1 ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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