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antibody and ELISA experts

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Anti-SOD2/Mnsod Rabbit Monoclonal Antibody

Catalog Number: M00349

Overview

Product Name	Anti-SOD2/Mnsod Rabbit Monoclonal Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-SOD2/Mnsod Rabbit Monoclonal Antibody catalog # M00349. Tested in WB, IHC applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, WB
Clonality	Monoclonal IDO-19
Formulation	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. *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. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P04179

Technical Details

Immunogen	A synthesized peptide derived from human SOD2
Isotype	Rabbit IgG
Form	Liquid
Concentration	0.5mg/ml
Purification	Affinity-chromatography
Suggested Dilutions	WB 1:1000-5000 IHC 1:50-200

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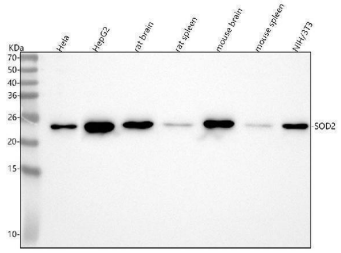
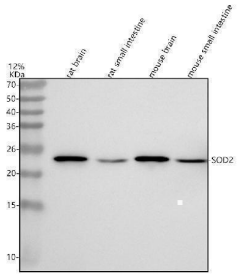
Anti-SOD2/Mnsod Rabbit Monoclonal Antibody (M00349) Images



Western blot analysis of SOD2/Mnsod using anti-SOD2/Mnsod antibody (M00349). 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: human Hela whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: rat brain tissue lysates, Lane 4: rat spleen tissue lysates, Lane 5: mouse brain tissue lysates, Lane 6: mouse spleen tissue lysates, Lane 7: mouse NIH/3T3 whole cell 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-SOD2/Mnsod antigen affinity purified monoclonal antibody (Catalog # M00349) at 1:500 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 SOD2/Mnsod at approximately 25 kDa. The expected band size for SOD2/Mnsod is at 25 kDa.



Western blot analysis of SOD2/Mnsod using anti-SOD2/Mnsod antibody (M00349). 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: rat brain tissue lysates, Lane 2: rat small intestine tissue lysates, Lane 3: mouse brain tissue lysates, Lane 3: mouse small intestine 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-SOD2/Mnsod antigen affinity purified monoclonal antibody (Catalog # M00349) at 1:500 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 1:500 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 SOD2/Mnsod at approximately 25 kDa. The expected band size for SOD2/Mnsod is at 25 kDa.

TTM treatment reduces kidney copper content, cuproptosis-related proteins, and ROS in a CaOx deposition mouse model. (A) Renal copper content across four groups; (B) The WB analysis of cuproptosis-related proteins (Lip-DLAT, Lip-DLST, ACO2, LIAS, HSP70, FDX1, and GAPDH); no quantification performed due to obvious differences; (C) IHC staining of FDX1 (× 200; scale bar 100 um), NOX2 (× 100;

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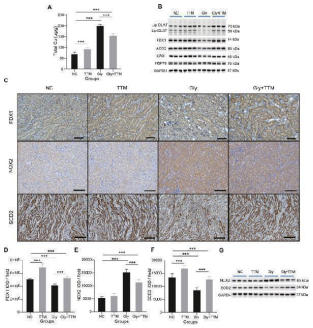
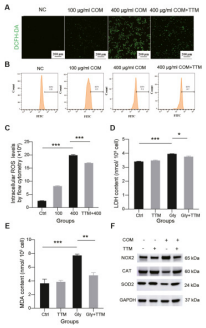
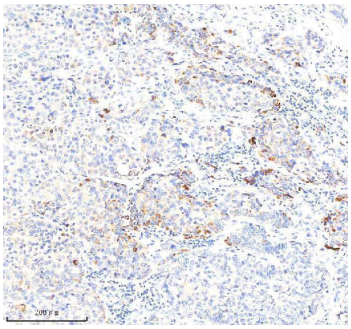


scale bar 200 um) and SOD2 (× 100; scale bar 200 um) in the renal cortex; (D) Quantification of FDX1 IHC staining (IOD values), corresponding to panel C; (E) Quantification of NOX2 IHC staining (IOD values), corresponding to panel C; (F) Quantification of SOD2 IHC staining (IOD values), corresponding to panel C; (G) The WB analysis of ROS-related proteins NOX2, SOD2, and GAPDH; no quantification performed due to obvious differences. NC, normal control; TTM, tetrathiomolybdate; Gly, glyoxylate; lip-DLAT, lipoylated dihydrolipoamide S-acetyltransferase; lip-DLST, lipoylated dihydrolipoamide succinyltransferase; ROS, reactive oxygen species; WB, Western blot; FDX1, ferredoxin 1; ACO2, aconitase 2; LIAS, lipoic acid synthetase; HSP70, heat shock protein 70; GAPDH, glyceraldehyde-3-phosphate dehydrogenase; IHC, immunohistochemistry; NOX2, nicotinamide adenine dinucleotide phosphate oxidase 2; SOD2, superoxide dismutase 2; IOD, integrated optical density. ∗∗∗ p



TTM treatment reduces ROS level in HK-2 cells stimulated with COM. (A) Representative images of ROS detected by DCFH-DA staining in HK-2 cells under COM and TTM treatments, viewed by fluorescence microscopy; (B) Representative flow cytometry images for ROS detection under the same conditions; (C) Quantification of ROS levels by flow cytometry across groups; (D) LDH levels in HK-2 cell supernatants for each treatment; (E) MDA levels in HK-2 cell supernatants for each treatment; (F) The WB analysis of ROS-related proteins (NOX2, CAT, SOD2, and GAPDH). Data presentation: values are mean with standard error. NC, normal control; COM, calcium oxalate monohydrate; TTM, tetrathiomolybdate; DCFH-DA, 2′,7′-dichlorodihydrofluorescein diacetate; ROS, reactive oxygen species; LDH, lactate dehydrogenase; MDA, malondialdehyde; NOX2, nicotinamide adenine dinucleotide phosphate oxidase 2; CAT, catalase; SOD2, superoxide dismutase 2; GAPDH, glyceraldehyde-3-phosphate dehydrogenase. ∗ p



IHC analysis of SOD2 using anti-SOD2 antibody (M00349). SOD2 was detected in a paraffin-embedded section of human liver cancer 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 1:50 rabbit anti-SOD2 Antibody (M00349) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

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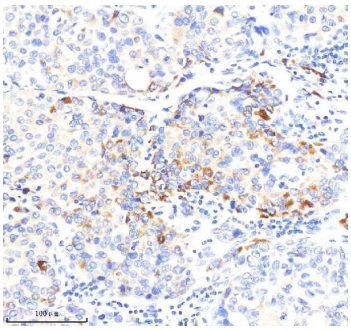

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1 Publications Citing This Product

1. PubMed ID: 27443826, Maternal inflammation activated ROS-p38 MAPK predisposes offspring to heart damages caused by isoproterenol via augmenting ROS generation

Visit bosterbio.com/anti-sod2-rabbit-monoclonal-antibody-m00349-boster.html to see all 1 publications.

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