abcam

Product datasheet

Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] ab137037

Recombinant RabMAb

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Overview

Product name	Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2]
Description	Rabbit monoclonal [EPVANR2] to SOD2/MnSOD (acetyl K68)
Host species	Rabbit
Specificity	This antibody only detects SOD2/MnSOD when acetylated at Lysine 68. According to BLAST analysis, the antibody might cross-react with Fer (Uniprot P70451) isoform 3 in mouse samples. No experiment has been done to confirm this possibility.
Tested applications	**Suitable for:** IHC-P, WB, Dot blot
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human SOD2/MnSOD (acetyl K68). The exact sequence is proprietary. Database link: **P04179** (Peptide available as **ab176149**)
Positive control	WB: Mouse heart lysate. Rat kidney tissue lysate. SOD2 transfected HEK-293T lysate. IHC-P: Human cervical carcinoma. Human carcinoma kidney tissue. Rat liver tissue. Mouse kidney tissue. Human muscle tissue.
General notes	This antibody was developed as part of a collaboration with the lab of David Guis at Vanderbilt University. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid

Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 0.05% BSA, 40% Glycerol, 59% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPVANR2
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab137037 in the following tested applications.

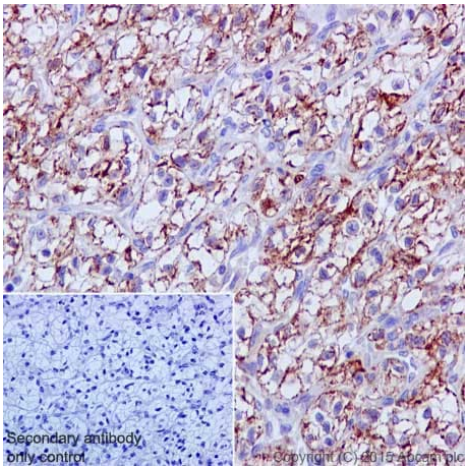
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**.
WB	★★★★★ **(4)**	1/1000 - 1/10000. Predicted molecular weight: 24 kDa.
Dot blot		1/1000.

Target

Function	Destroys superoxide anion radicals which are normally produced within the cells and which are toxic to biological systems.
Involvement in disease	Genetic variation in SOD2 is associated with susceptibility to microvascular complications of diabetes type 6 (MVCD6) [MIM:612634]. These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis.
Sequence similarities	Belongs to the iron/manganese superoxide dismutase family.
Post-translational modifications	Nitrated under oxidative stress. Nitration coupled with oxidation inhibits the catalytic activity.
Cellular localization	Mitochondrion matrix.

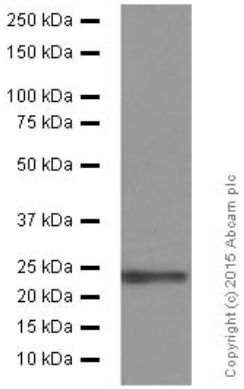
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human clear cell carcinoma kidney tissue labelling SOD2 (acetyl K68) with purified ab137037 at 1/150. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a goat anti-rabbit IgG H&L (HRP) was used as the secondary antibody (1/500).

Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Western blot - Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037)

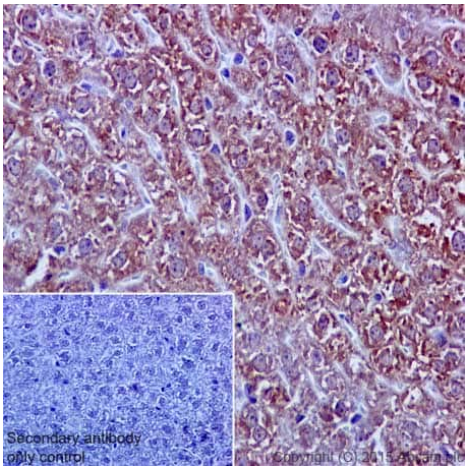
Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037) at 1/1000 dilution (purified) + Mouse heart lysate at 20 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/10000 dilution

Predicted band size: 24 kDa

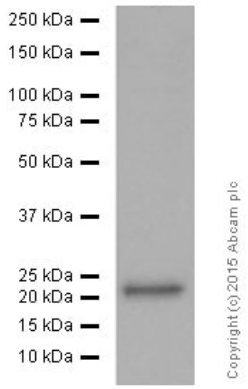
Blocking/Dilution buffer and concentration: 5% NFDM/TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat liver tissue labelling SOD2 (acetyl K68) with purified ab137037 at 1/150. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a goat anti-rabbit IgG H&L (HRP) was used as the secondary antibody (1/500).

Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Western blot - Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037)

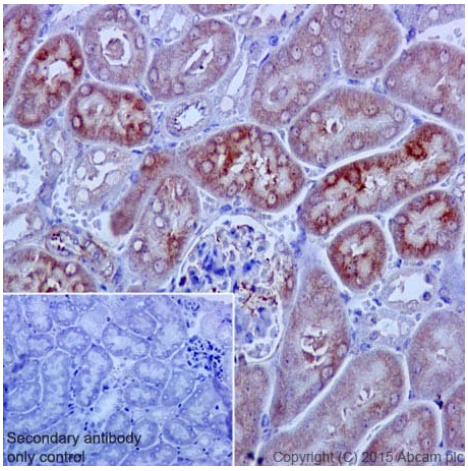
Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037) at 1/1000 dilution (purified) + Rat kidney tissue lysate at 20 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/10000 dilution

Predicted band size: 24 kDa

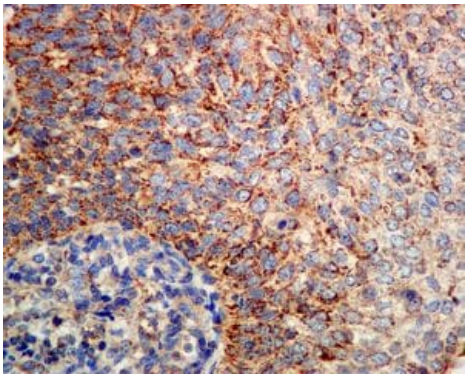
Blocking/Dilution buffer and concentration: 5% NFDM/TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue labelling SOD2 (acetyl K68) with purified ab137037 at 1/150. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a goat anti-rabbit IgG H&L (HRP) was used as the secondary antibody (1/500).

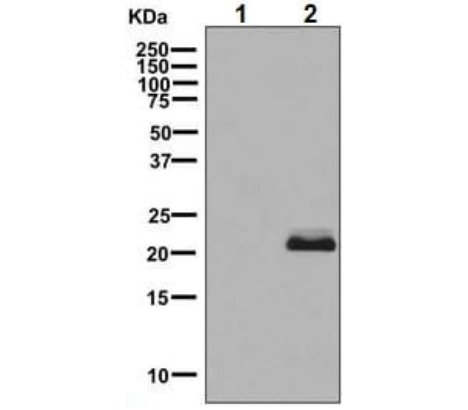
Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cervical carcinoma tissue labelling SOD2 (acetyl K68) with unpurified ab137037 at 1/100 dilution.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037)

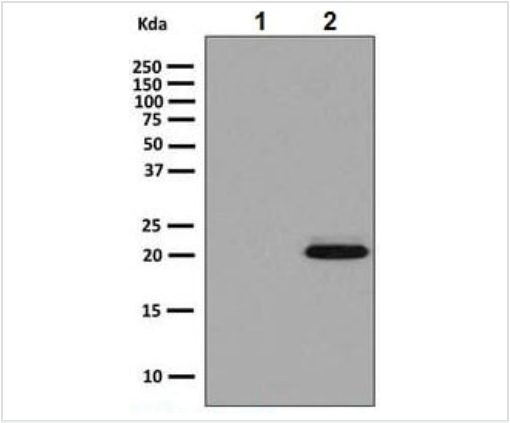
All lanes : Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037) at 1/1000 dilution (unpurified)

Lane 1 : Non transfected HEK-293T lysate
Lane 2 : SOD2 transfected HEK-293T lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP conjugated Goat anti Rabbit IgG at 1/2000 dilution

Predicted band size: 24 kDa



Western blot - Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037)

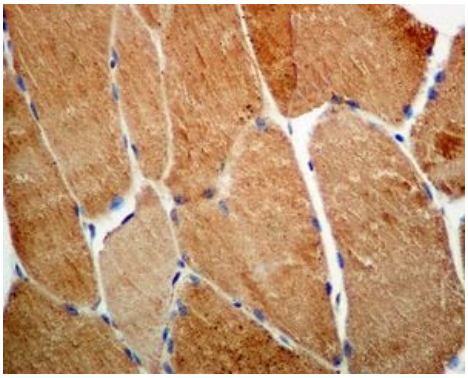
All lanes : Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037) at 1/1000 dilution (unpurified)

Lane 1 : Non transfected HEK-293T cell lysate with with Acetyl SOD2 (K68) peptide
Lane 2 : SOD2 transfected HEK-293T cell lysate with control peptide

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP conjugated Goat anti Rabbit IgG at 1/2000 dilution

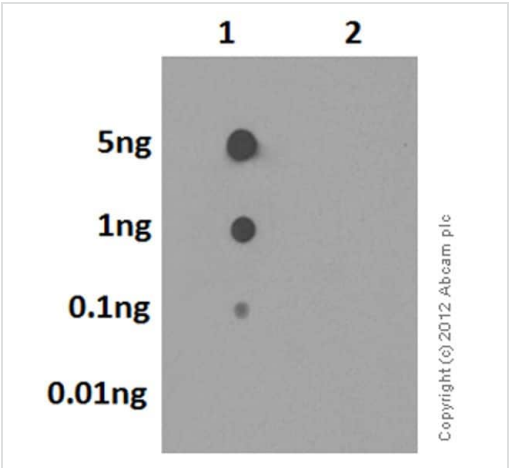
Predicted band size: 24 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human muscle tissue labelling SOD2 (acetyl K68) with unpurified ab137037 at 1/100 dilution.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Dot Blot - Anti-SOD2/MnSOD (acetyl K68) antibody [EPVANR2] (ab137037)

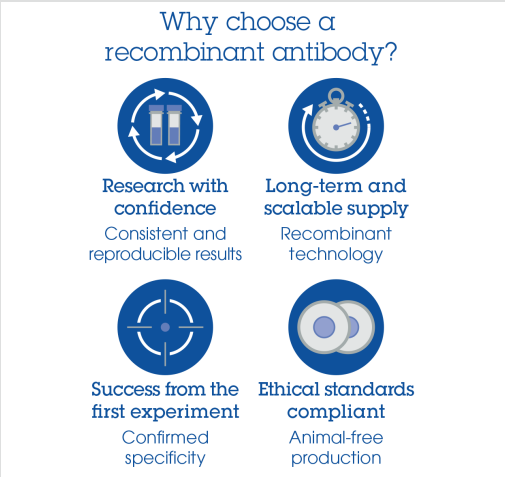
Dot blot analysis labelling SOD2 (acetyl K68) with ab137037 at a dilution of 1/1000. Peroxidase conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody at a dilution of 1/2500.

Blocking and diluting buffer: 5% NFDM/TBST.

Lane 1: SOD2 (acetyl K68) acetylated peptide.

Lane 2: SOD2 Non-acetylated peptide.

Exposure time: 3 minutes.



Anti-SOD2/MnSOD (acetyl K68) antibody

[EPVANR2] (ab137037)

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