abcam

Product datasheet

Anti-Superoxide Dismutase 1 antibody ab16831

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概述

产品名称	Anti-Superoxide Dismutase 1抗体
描述	**兔多克隆抗体**to Superoxide Dismutase 1
宿主	Rabbit
特异性	There is no cross-reactivity with SOD2,3 and 4 by WB.
经测试应用	**适用于:** WB, ICC/IF, IHC-P, IP, IHC-Fr
种属反应性	**与反应:** Mouse, Rat, Human **预测可用于:** Macaque monkey
免疫原	Recombinant full length protein corresponding to Human Superoxide Dismutase 1. Database link: P00441
阳性对照	WB: Mouse brain and mouse liver tissue lysates, HeLa, 293T and Jurkat cell lysates. IHC-P: Human placenta tissue.

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
存储溶液	Preservative: 0.03% Sodium Azide Constituents: 50% Glycerol, 0.01% BSA, HEPES, 0.15M Sodium chloride
纯度	Protein A purified
克隆	**多克隆**
同种型	IgG

应用

Our Abpromise guarantee covers the use of **ab16831** in the following tested applications.

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

应用	Ab评论	说明
WB	★★★★★	1/2000. Predicted molecular weight: 17 kDa.

应用	Ab评论	说明
ICC/IF	★★★★☆	Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration.
IP		Use a concentration of 1 µg/ml.
IHC-Fr	★★★★★	Use at an assay dependent concentration.

靶标

功能

Destroys radicals which are normally produced within the cells and which are toxic to biological systems.

疾病相关

Defects in SOD1 are the cause of amyotrophic lateral sclerosis type 1 (ALS1) [MIM:105400]. ALS1 is a familial form of amyotrophic lateral sclerosis, a neurodegenerative disorder affecting upper and lower motor neurons and resulting in fatal paralysis. Sensory abnormalities are absent. Death usually occurs within 2 to 5 years. The etiology of amyotrophic lateral sclerosis is likely to be multifactorial, involving both genetic and environmental factors. The disease is inherited in 5-10% of cases leading to familial forms.

序列相似性

Belongs to the Cu-Zn superoxide dismutase family.

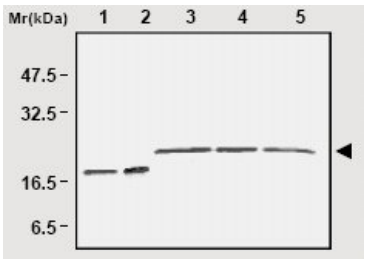
翻译后修饰

Unlike wild-type protein, the pathogenic variants ALS1 Arg-38, Arg-47, Arg-86 and Ala-94 are polyubiquitinated by RNF19A leading to their proteasomal degradation. The pathogenic variants ALS1 Arg-86 and Ala-94 are ubiquitinated by MARCH5 leading to their proteasomal degradation.
The ditryptophan cross-link at Trp-33 is reponsible for the non-disulfide-linked homodimerization. Such modification might only occur in extreme conditions and additional experimental evidence is required.

细胞定位

Cytoplasm. The pathogenic variants ALS1 Arg-86 and Ala-94 gradually aggregates and accumulates in mitochondria.

图片

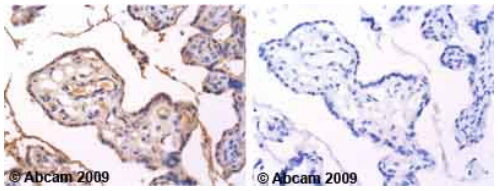


Western blot - Anti-Superoxide Dismutase 1 antibody (ab16831)

All lanes : Anti-Superoxide Dismutase 1 antibody (ab16831) at 1/2000 dilution

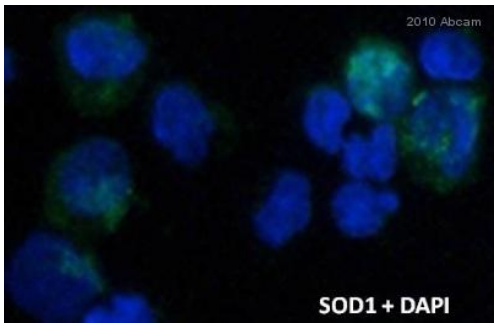
Lane 1 : Mouse brain tissue lysate
Lane 2 : Mouse liver tissue lysate
Lane 3 : HeLa cell lysate
Lane 4 : 293T cell lysate
Lane 5 : Jurkat cell lysate

Predicted band size: 17 kDa



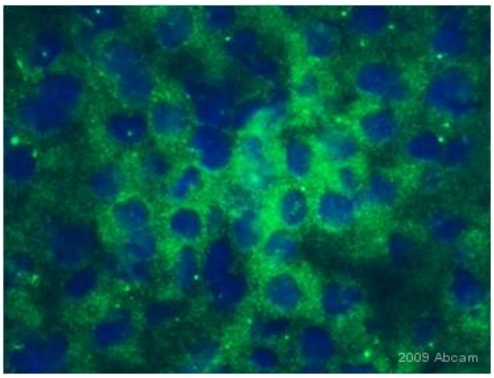
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Superoxide Dismutase 1 antibody (ab16831)

ab16831 staining human normal placenta tissue. Staining is localised to cytoplasm.
Left panel: with primary antibody at 2 ug/ml.
Right panel: isotype control.
Sections were stained using an automated system DAKO Autostainer Plus , at room temperature. Sections were rehydrated and antigen retrieved with the Dako 3-in-1 AR buffer EDTA pH 9.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 minutes and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.



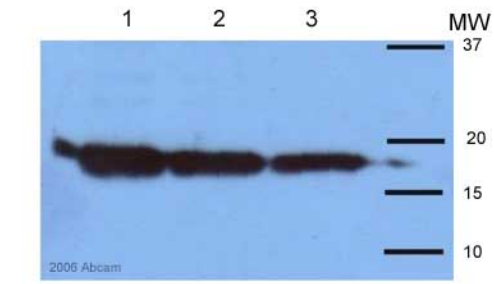
Immunocytochemistry/ Immunofluorescence - Anti-Superoxide Dismutase 1 antibody (ab16831)
This image is courtesy of an anonymous Abreview

ab16831 staining Superoxide Dismutase 1 in rat bone marrow cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with methanol and blocked with 2% BSA for 2 hours at 25°C. Samples were incubated with the primary antibody (1/250 in PBS) for 12 hours at 4°C. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG polyclonal (1/500) was used as the secondary antibody. DAPI used to stain the nucleus.



Immunohistochemistry (Frozen sections) - Anti-Superoxide Dismutase 1 antibody (ab16831)
This image is courtesy of an anonymous Abreview

ab16831 staining superoxide dismutase in mouse liver tissue by immunohistochemistry (frozen sections). Cells were formaldehyde fixed and permeabilized in 0.2% Triton X-100 prior to blocking in 2% BSA for 10 minutes at 21°C. The primary antibody was diluted 1/200 and incubated with the sample for 9 hours at 4°C. Alexa fluor® 488 goat polyclonal to rabbit Ig, diluted 1/200, was used as the secondary.



Western blot - Anti-Superoxide Dismutase 1 antibody (ab16831)

All lanes : Anti-Superoxide Dismutase 1 antibody (ab16831) at 1/2000 dilution

Lane 1 : 40ug mouse liver homogenate
Lane 2 : 20ug mouse liver homogenate
Lane 3 : 5ug mouse liver homogenate

Secondary
All lanes : HRP conjugated donkey anti-rabbit IgG

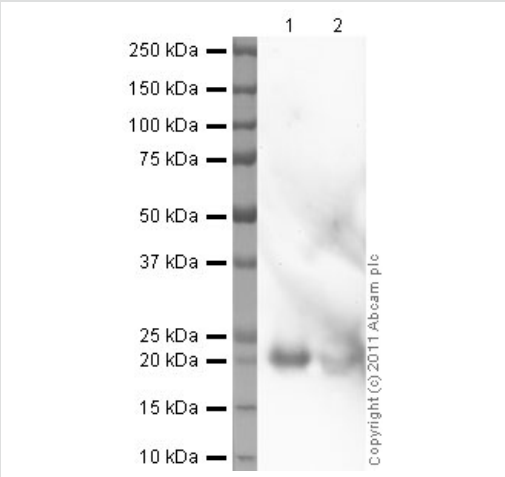
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 17 kDa
Observed band size: 17 kDa

Exposure time: 20 seconds

This image is courtesy of an Abreview submitted by **Sandra Sobocanec** on **16 March 2006.**



Western blot - Anti-Superoxide Dismutase 1 antibody (ab16831)

Anti-Superoxide Dismutase 1 antibody (ab16831) at 1/2000 dilution + Recombinant human Superoxide Dismutase 1 protein (ab90040) at 0.1 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 17 kDa

Exposure time: 4 minutes

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