

Product datasheet

Anti-Superoxide Dismutase 1 antibody [SOD1/2089] - BSA and Azide free ab237902

[2 Images](#)

Overview

Product name	Anti-Superoxide Dismutase 1 antibody [SOD1/2089] - BSA and Azide free
Description	Mouse monoclonal [SOD1/2089] to Superoxide Dismutase 1 - BSA and Azide free
Host species	Mouse
Tested applications	Suitable for: IHC-P, Protein Array
Species reactivity	Reacts with: Human
Immunogen	Recombinant full length protein corresponding to Human Superoxide Dismutase 1 aa 1-200. Database link: P00441

 [Run BLAST with](#)

 [Run BLAST with](#)

Positive control IHC-P: Human placenta tissue.

General notes The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A/G purified
Purification notes	Ab purified from Bioreactor Concentrate by Protein A/G.
Clonality	Monoclonal
Clone number	SOD1/2089

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab237902 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		Use a concentration of 0.5 - 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Incubate with primary ab for 30 minutes at RT
Protein Array		Use at an assay dependent concentration.

Target

Function

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

Involvement in disease

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.

Sequence similarities

Belongs to the Cu-Zn superoxide dismutase family.

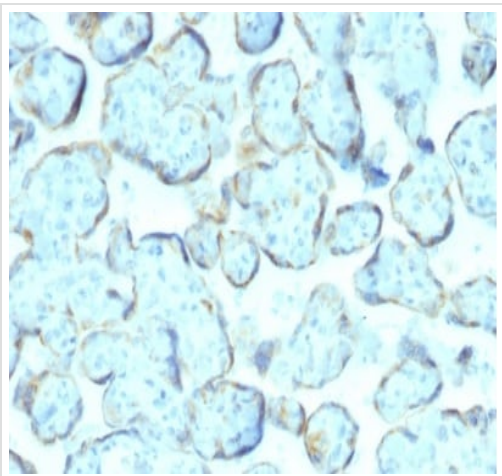
Post-translational modifications

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 responsible for the non-disulfide-linked homodimerization. Such modification might only occur in extreme conditions and additional experimental evidence is required.

Cellular localization

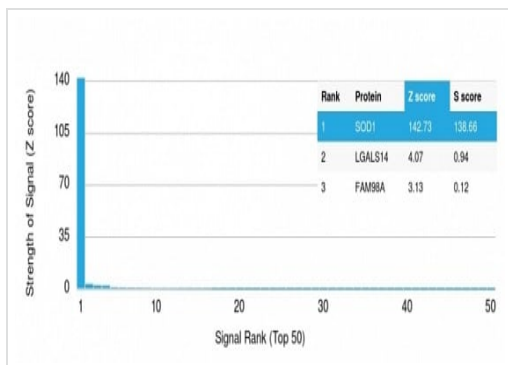
Cytoplasm. The pathogenic variants ALS1 Arg-86 and Ala-94 gradually aggregates and accumulates in mitochondria.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Superoxide Dismutase 1 antibody [SOD1/2089] - BSA and Azide free (ab237902)

Formalin-fixed, paraffin-embedded human placenta tissue stained for Superoxide dismutase 1 using ab237902 at 1 µg/mL in immunohistochemical analysis.



Protein Array - Anti-Superoxide Dismutase 1 antibody [SOD1/2089] - BSA and Azide free (ab237902)

Analysis of Protein Array containing more than 19,000 full-length human proteins using ab237902.

Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt™ array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProt™ are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target. A MAb is considered to specific to its intended target, if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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