Product datasheet

Anti-Superoxide Dismutase 1 antibody ab52950

Overview

Product name: Anti-Superoxide Dismutase 1 antibody
Description: Rabbit polyclonal to Superoxide Dismutase 1
Host species: Rabbit
Tested applications:
- Suitable for: WB, IP, IHC-P
- Unsuitable for: Flow Cyt
Species reactivity:
- Reacts with: Human
- Does not react with: Mouse, Rat
Immunogen: A synthetic peptide corresponding to residues near the N-terminus of human Superoxide Dismutase 1
Positive control: Jurkat cell lysate, human placenta and HeLa cells.

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. Stable for 12 months at -20°C.
Storage buffer:
  pH: 7.20
  Preservative: 0.01% Sodium azide
  Constituents: 49% PBS, 50% Glycerol, 0.05% BSA
Purity: Immunogen affinity purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab52950 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
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<th>Application</th>
<th>Notes</th>
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<td>WB</td>
<td>1/5000. Detects a band of approximately 16 kDa (predicted molecular weight: 16 kDa).</td>
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Application notes  

Is unsuitable for Flow Cyt.

**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**

**Western blot - Anti-Superoxide Dismutase 1 antibody (ab52950)**  
Anti-Superoxide Dismutase 1 antibody (ab52950) at 1/5000 dilution + Jurkat cell lysate at 10 µg

**Secondary**  
goat anti-rabbit HRP at 1/2000 dilution

**Predicted band size:** 16 kDa

**Observed band size:** 16 kDa
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Superoxide Dismutase 1 antibody (ab52950)

ab52950 at 1/50 dilution staining Superoxide Dismutase 1 in human placenta by Immunohistochemistry, Paraffin embedded tissue.

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