Anti-Superoxide Dismutase 1 antibody (ab13499)

Overview

Product name Anti-Superoxide Dismutase 1 antibody

Description Rabbit polyclonal to Superoxide Dismutase 1

Tested applications IHC-Fr, IHC-P, WB, IP, ELISA more details

Cross reactivity

Reacts with
Mouse, Rat, Cow, Human

Immunogen

Full length protein (Rat).

Positive control HeLa cell lysate.

Properties

Form Liquid

Storage instructions Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

Storage buffer Preservative: 0.1% Sodium Azide
Constituents: 50% Glycerol, PBS, pH 7.0

Concentration 50 µg at 1mg/ml

Purity Immunogen affinity purified

Purification notes This antibody was purified on an antigen coupled sepharose column.

Clonality Polyclonal

Isotype IgG

Research areas Metabolism >> Types of disease >> Cancer
Metabolism >> Pathways and Processes >> Redox metabolism >> Antioxidants
Metabolism >> Pathways and Processes >> Redox metabolism >> Oxidative stress
Cancer >> Cancer Metabolism >> Cellular metabolic process

Cell Biology >> Other Antibodies >> Oxidative Stress
Signal Transduction >> Protein Trafficking >> Chaperones >> Heat Shock Proteins

Applications

Our Abpromise guarantee covers the use of **ab13499** in the following tested applications.

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

IHC-Fr: Use a concentration of 1 µg/ml.

IHC-P: Use a concentration of 2 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

WB: Use a concentration of 1 µg/ml. Detects a band of approximately 19 , 23 kDa (predicted molecular weight: 18 kDa).

IP: Use a concentration of 10 µg/ml.

Secondary antibodies

IHC-Fr
IHC-P 1 Image
WB 1 Image
IP

ELISA
ELISA: Use at an assay dependent dilution.

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 reponsible 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.

Alternative names
ALS 1 antibody
ALS antibody
ALS1 antibody

Anti-Superoxide Dismutase 1 antibody (ab13499) at 1 µg/ml + Cell lysates prepared from mixed human cell lines (A431, A549, HCT116, HeLa, HEK293, HepG2, HL-60, HUVEC, Jurkat, MCF7, PC3 and T98G)

Predicted band size : 18 kDa

Cejková J *et al.* Decreased expression of antioxidant enzymes in the conjunctival epithelium of dry eye (Sjögren's syndrome) and its possible contribution to the development of ocular surface oxidative injuries. *Histol Histopathol* **23**:1477-83 (2008). IHC-Fr; Human.Read more (PubMed: 18830933) »

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