

# Human SOD1/Cu-Zn SOD antibody

Catalog Number: ATGA0405

## PRODUCT INFORMATION

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**Catalog number**

ATGA0405

**Clone No.**

AT6F1

**Product type**

Monoclonal Antibody

**UnitProt No.**

P00441

**NCBI Accession No.**

NP\_000445

**Alternative Names**

Superoxide dismutase 1 soluble, ALS, SOD, ALS1, IPOA, Cu-Zn superoxide dismutase, Superoxide dismutase 1 soluble, SOD1, Superoxide dismutase 1, soluble ALS 1, Amyotrophic lateral sclerosis 1 Amyotrophic lateral sclerosis 1 adult, Cu/Zn SOD, Cu/Zn superoxide dismutase, Homodimer, Indophenoxidase A, Mn superoxide dismutase, SOD 1, SOD soluble, SOD2, SODC, Superoxide dismutase 1 soluble, Superoxide dismutase Cu Zn, Superoxide dismutase cystolic

## PRODUCT SPECIFICATION

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**Antibody Host**

Mouse

**Reacts With**

Human

**Concentration**

1mg/ml (determined by BCA assay)

**Formulation**

Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

**Immunogen**

Recombinant human SOD1 (1-154aa) purified from E. coli

**Isotype**

IgG1 kappa

**Purification Note**

By protein-A affinity chromatography

**Application**

ELISA, WB, ICC/IF, FACS

**Usage**

The antibody has been tested by ELISA, Western blot, ICC/IF and FACS analysis to assure specificity and

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reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

## Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

### Description

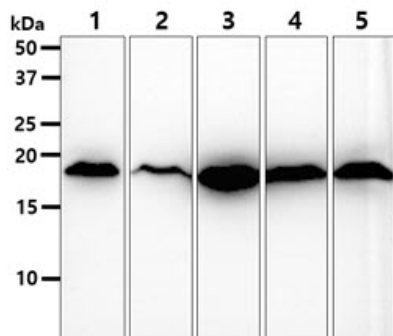
Cu/Zn superoxide dismutase (SOD1), is a major antioxidant enzyme that catalyzes the conversion of superoxide anion to hydrogen peroxide and molecular oxygen. SOD1 facilitates the dismutation of oxygen radicals to hydrogen peroxide and also catalyzes pro-oxidant reactions, which include the peroxidase activity and hydroxyl radical generating activity. Also over 100 distinct SOD1 inherited mutations have been identified in the familial form of amyotrophic lateral sclerosis (ALS), a progressive degenerative disease of motor neurons. The mechanism by which mutant SOD1 induces the neurodegeneration observed in ALS is still unclear.

### General References

- Deng HX., et al. (1993) Science. 261(5124): 1047-51.
- Valentine JS., et al. (2003) Proc Natl Acad Sci USA. 100(7): 3617-22.
- Rosen DR., et al. (1993) Nature. 362(6415): 59-62.

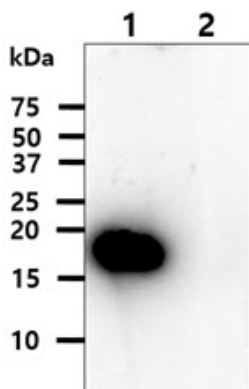
## DATA

### Western blot analysis (WB)



The cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human SOD1 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

- Lane 1. : A549 cell lysate
- Lane 2. : A431 cell lysate
- Lane 3. : 293T cell lysate
- Lane 4. : PC3 cell lysate
- Lane 5. : U87MG cell lysate



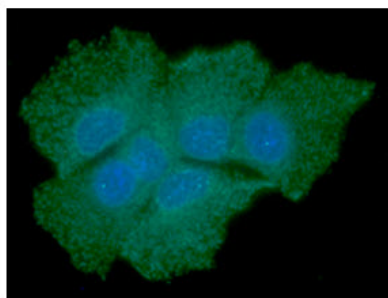
The recombinant proteins (20ng) of SOD two isoform were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human SOD1 (1:1000).

- Lane 1 : Recombinant protein SOD1
- Lane 2 : Recombinant protein SOD2

## Human SOD1/Cu-Zn SOD antibody

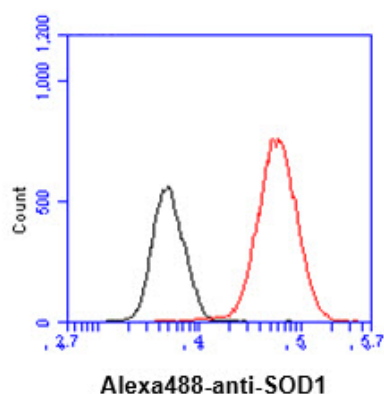
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### Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of SOD1 in Hep3B cells. The cell was stained with ATGA0405 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).

### Flow cytometry (FACS)



Flow cytometry analysis of SOD1 in Hep3B cell line, staining at 2-5ug for  $1 \times 10^6$  cells (red line). The secondary antibody used goat anti-mouse IgG Alexa fluor 488 conjugate. Isotype control antibody was mouse IgG (black line).