# SOD-1 Monoclonal Antibody

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| **Catalog No** | BYab-18765 |
| **Isotype** | IgG |
| **Reactivity** | Human;Mouse |
| **Applications** | WB;IF;FCM;ELISA |
| **Gene Name** | SOD1 |
| **Protein Name** | Superoxide dismutase [Cu-Zn] |
| **Immunogen** | Purified recombinant fragment of human SOD-1 expressed in E. Coli. |
| **Specificity** | SOD-1 Monoclonal Antibody detects endogenous levels of SOD-1 protein. |
| **Formulation** | Ascitic fluid containing 0.03% sodium azide,0.5% BSA, 50%glycerol. |
| **Source** | Monoclonal, Mouse |
| **Purification** | Affinity purification |
| **Dilution** | Western Blot: 1/500 - 1/2000. Immunofluorescence: 1/200 - 1/1000. Flow cytometry: 1/200 - 1/400. ELISA: 1/10000. Not yet tested in other applications. |
| **Concentration** | 1 mg/ml |
| **Purity** | ≥90% |
| **Storage Stability** | -20°C/1 year |
| **Synonyms** | SOD1; Superoxide dismutase [Cu-Zn]; Superoxide dismutase 1; hSod1 |
| **Observed Band** | |
| **Cell Pathway** | Cytoplasm . Mitochondrion . Nucleus . Predominantly cytoplasmic; the pathogenic variants ALS1 Arg-86 and Ala-94 gradually aggregates and accumulates in mitochondria. . |
| **Tissue Specificity** | Colon,Fetal brain cortex,Placenta, |
| **Function** | catalytic activity:2 superoxide + 2 H(+) = O(2) + H(2)O(2).,cofactor:Binds 1 copper ion per subunit.,cofactor:Binds 1 zinc ion per subunit.,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.,function:Destroys radicals which are normally produced within the cells and which are toxic to biological systems.,miscellaneous:The protein (both wild-type and ALS1 variants) has a tendency to form fibrillar aggregates in the |

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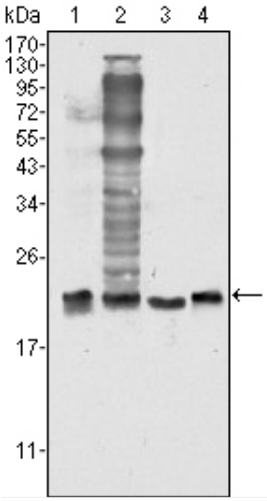
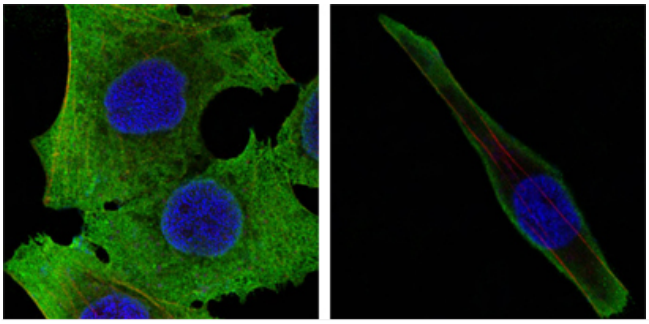
| **Background** | The protein encoded by this gene binds copper and zinc ions and is one of two isozymes responsible for destroying free superoxide radicals in the body. The encoded isozyme is a soluble cytoplasmic protein, acting as a homodimer to convert naturally-occuring but harmful superoxide radicals to molecular oxygen and hydrogen peroxide. The other isozyme is a mitochondrial protein. Mutations in this gene have been implicated as causes of familial amyotrophic lateral sclerosis. Rare transcript variants have been reported for this gene. [provided by RefSeq, Jul 2008], |
| **matters needing attention** | Avoid repeated freezing and thawing! |
| **Usage suggestions** | This product can be used in immunological reaction related experiments. For more information, please consult technical personnel. |

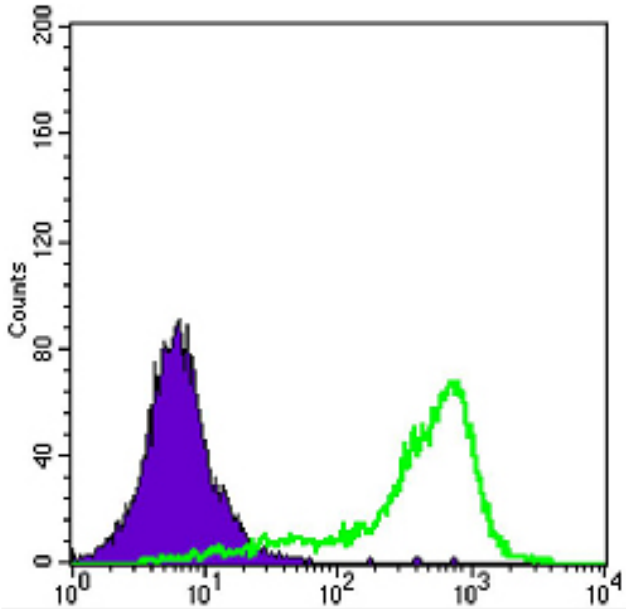
## Products Images




Western Blot analysis using SOD-1 Monoclonal Antibody against HeLa (1), NIH/3T3 (2), A549 (3) and A431 (4) cell lysate.



Confocal immunofluorescence analysis of PANC-1 (left) and SKBR-3 (right) cells using SOD-1 Monoclonal Antibody (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.




Flow cytometric analysis of A431 cells using SOD-1 Monoclonal Antibody (green) and negative control (purple).