

# Immunotag™ SOD-1 Monoclonal Antibody

Antibody Specification	
Catalog No.	ITM0590
Product Description	Immunotag™ SOD-1 Monoclonal Antibody
Size	50 µg, 100 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	SOD-1
Clonality	Monoclonal
Storage/Stability	-20°C/1 year
Application	WB,IF,FCM,ELISA
Recommended 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
Reactive Species	Human,Mouse
Host Species	Mouse
Immunogen	Purified recombinant fragment of human SOD-1 expressed in E. Coli.
Specificity	SOD-1 Monoclonal Antibody detects endogenous levels of SOD-1 protein.
Purification	Affinity purification
Form	Ascitic fluid containing 0.03% sodium azide.
Gene Name	SOD1
Accession No.	P00441 P08228
Alternate Names	SOD1; Superoxide dismutase [Cu-Zn]; Superoxide dismutase 1; hSod1

## Antibody Specification

Description	superoxide dismutase 1, soluble(SOD1) Homo sapiens 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-occurring 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],
Cell Pathway/ Category	Amyotrophic lateral sclerosis (ALS),Huntington's disease,Prion diseases,
Protein Expression	Colon,Fetal brain cortex,Placenta,
Subcellular Localization	extracellular region,extracellular space,nucleus,nucleoplasm,cytoplasm,mitochondrion,mitochondrial intermembrane space,mitochondrial matrix,lysosome,peroxisome,cytosol,plasma membrane,extracellular matrix,
Protein 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 absence of the intramolecular disulfide bond or of bound zinc ions. These aggregates may have cytotoxic effects. Zinc binding promotes dimerization and stabilizes the native form.,online information:ALS genetic mutations db,online information:Superoxide dismutase entry,PTM:Unlike wild-type protein, the pathogenic variants ALS1 Arg-38, Arg-47, Arg-86 and Ala-94 are polyubiquitinated by RNF19A; which leads to their proteasomal degradation.,similarity:Belongs to the Cu-Zn superoxide dismutase family.,subunit:Homodimer. The pathogenic variants ALS1 Arg-38, Arg-47, Arg-86 and Ala-94 interact with RNF19A, whereas wild-type protein does not.,
Usage	For Research Use Only! Not for diagnostic or therapeutic procedures.