

ARG22293 anti-SOD1 antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes SOD1
Tested Reactivity	Hu, Ms, Rat, Bov
Tested Application	ELISA, ICC/IF, IHC, IP, WB
Specificity	Detects ~23kDa (human) and ~19kDa (other species).
Host	Rabbit
Clonality	Polyclonal
Target Name	SOD1
Species	Rat
Immunogen	Rat Sod1
Conjugation	Un-conjugated
Alternate Names	homodimer; EC 1.15.1.1; SOD; HEL-S-44; Superoxide dismutase [Cu-Zn]; ALS1; Superoxide dismutase 1; IPOA; ALS; hSod1

Application Instructions

Application table	Application	Dilution
	ELISA	Assay-dependent
	ICC/IF	1:120
	IHC	Assay-dependent
	IP	Assay-dependent
	WB	1:2000

Application Note * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS (pH 7.0), 0.09% Sodium azide and 50% Glycerol
Preservative	0.09% Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw

cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

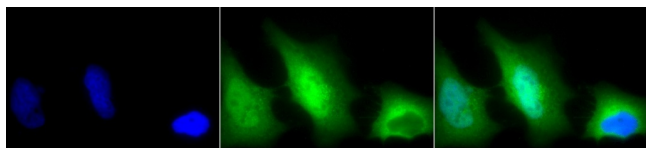
Note

For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

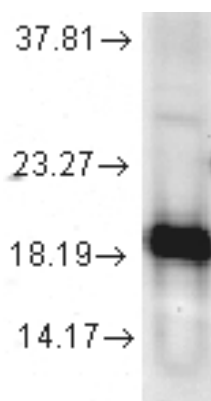
Gene Symbol	Sod1
Gene Full Name	superoxide dismutase 1, soluble
Background	The protein encoded by this gene binds copper and zinc ions and is one of two isozymes responsible for destroying free superoxide radicals in the body. The encoded isozyme is a soluble cytoplasmic protein, acting as a homodimer to convert naturally-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]
Function	Destroys radicals which are normally produced within the cells and which are toxic to biological systems. [UniProt]
Calculated Mw	~23 kDa (human) and ~19 kDa (other species).
PTM	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. Palmitoylation helps nuclear targeting and decreases catalytic activity. Succinylation, adjacent to copper catalytic site, probably inhibits activity. Desuccinylation by SIRT5 enhances activity.
Cellular Localization	Cytoplasm

Images



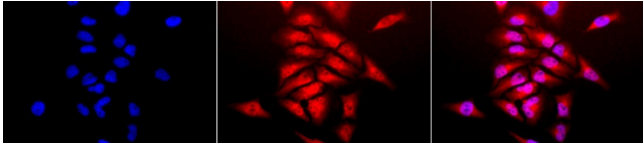
ARG22293 anti-Cu/Zn-SOD antibody ICC/IF image

Immunocytochemistry: 2% Formaldehyde (20 min at RT) fixed HeLa cells stained with ARG22293 anti-Cu/Zn-SOD antibody (green) at 1:120 dilution (12 hours at 4°C). Counterstain: DAPI (blue) nuclear stain at 1:40000 for 120 min at RT. Magnification: 100x. Left: DAPI (blue) nuclear stain, Middle: Primary antibody, Right: Composite.



ARG22293 anti-Cu/Zn-SOD antibody WB image

Western blot: Human cell line lysates stained with ARG22293 anti-Cu/Zn-SOD antibody at 1:1000 dilution.



ARG22293 anti-Cu/Zn-SOD antibody ICC/IF image

Immunocytochemistry: 2% Formaldehyde (20 min at RT) fixed HeLa cells stained with ARG22293 anti-Cu/Zn-SOD antibody (red) at 1:120 dilution (12 hours at 4°C). Counterstain: DAPI (blue) nuclear stain at 1:40000 for 120 min at RT. Magnification: 20x. Left: DAPI (blue) nuclear stain, Middle: Primary antibody, Right: Composite.
