

ARG57160 anti-SOD1 antibody [6F1]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [6F1] recognizes SOD1
Tested Reactivity	Hu
Tested Application	FACS, WB
Host	Mouse
Clonality	Monoclonal
Clone	6F1
Isotype	IgG1, kappa
Target Name	SOD1
Species	Human
Immunogen	Recombinant fragment around aa. 1-154 of Human 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

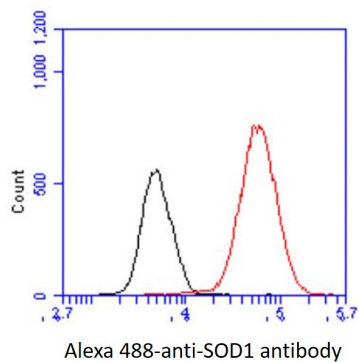
Application table	Application	Dilution
	FACS	Assay-dependent
	WB	Assay-dependent
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS (pH 7.4), 0.02% Sodium azide and 10% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	10% 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.

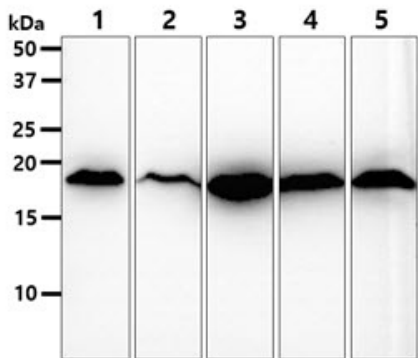
Database links	GeneID: 6647 Human Swiss-port # P00441 Human
Gene Symbol	SOD1
Gene Full Name	superoxide dismutase 1, soluble
Background	The protein encoded by this gene binds copper and zinc ions and is one of two isozymes responsible for destroying free superoxide radicals in the body. The encoded isozyme 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	16 kDa
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.

Images



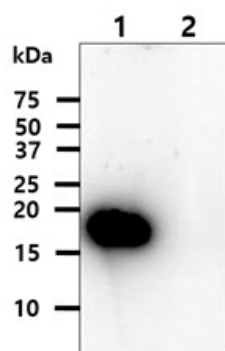
ARG57160 anti-SOD1 antibody [6F1] FACS image

Flow Cytometry: Hep3B cell line stained with ARG57160 anti-SOD1 antibody [6F1] at 2-5 µg for 1x10⁶ cells (red line). Secondary antibody: Goat anti-Mouse IgG Alexa fluor 488 conjugate. Isotype control antibody: Mouse IgG (black line).



ARG57160 anti-SOD1 antibody [6F1] WB image

Western blot: 40 µg of 1) A549, 2) A431, 3) 293T, 4) PC3, and 5) U87MG cell lysates stained with ARG57160 anti-SOD1 antibody [6F1] at 1:1000.



ARG57160 anti-SOD1 antibody [6F1] WB image

Western blot: 20 ng of 1) SOD1, and 2) SOD2 recombinant proteins stained with ARG57160 anti-SOD1 antibody [6F1] at 1:1000.