

Datasheet for 100-4191**Superoxide Dismutase Antibody****Overview**

Description:	Anti-Superoxide Dismutase (RABBIT) Antibody - 100-4191
Item No.:	100-4191
Size:	2 mL
Applications:	IF, Other, WB
Reactivity:	Bovine
Host Species:	Rabbit

Product Details

Background:	Superoxide Dismutase destroys radicals which are normally produced within the cells and which are toxic to biological systems.
Synonyms:	rabbit anti-Superoxide Dismutase Antibody, ALS 1 antibody, ALS antibody, ALS1 antibody, Amyotrophic lateral sclerosis 1 adult antibody, Amyotrophic lateral sclerosis 1 antibody, Cu/Zn SOD antibody, Cu/Zn superoxide dismutase antibody, Homodimer antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	SOD1
Reactivity:	Bovine
Immunogen Type:	Native Protein
Immunogen:	Superoxide Dismutase [Bovine Erythrocytes]
Purity/Specificity:	This product was prepared from monospecific antiserum by a delipidation and defibrination. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-rabbit serum, purified and partially purified Superoxide Dismutase [Bovine Erythrocytes]. Cross reactivity against Superoxide Dismutase from other tissues and species may occur but have not been specifically determined.

Relevant Links:	• UniProtKB - P00442 • NCBI - DAA33706.1 • GeneID - 281495
------------------------	--

Application Details

Suggested Applications:	IF, Other, WB (Based on references)
Application Note:	Anti-Superoxide Dismutase antibody is suitable for use in ELISA, immunohistochemistry, and western blot. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:6,000 - 1:30,000
IHC:	User Optimized
WB:	1:600 - 1:3,000

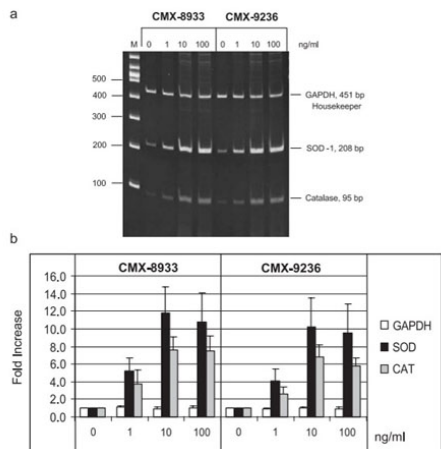
Formulation

Physical State:	Lyophilized
Concentration:	70 mg/mL by Refractometry
Buffer:	0.01 M Sodium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None
Reconstitution Volume:	2.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

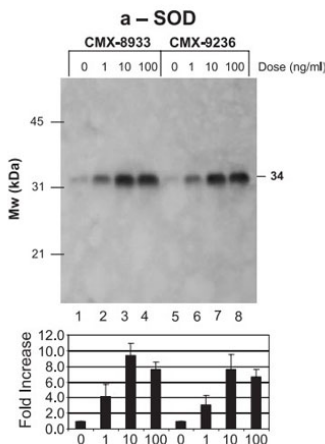
Western Blot using Anti-Superoxide Dismutase (RABBIT) Antibody.

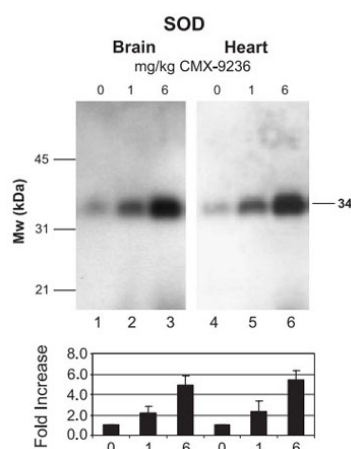
Dose-response RT-PCR analysis of m-RNA levels for antioxidant enzymes. (a) The up-regulation of SOD and CAT m-RNAs in comparison to untreated control after a 3-h stimulation by peptides CMX-8933 and CMX-9236 as a function of peptide dose (ng/ml) in primary neuron-glia rat cortical cultures. The gel electrophoresis data show increases in m-RNAs for SOD (208 bp amplicon) and CAT (95 bp amplicon) m-RNAs, whereas GAPDH m-RNA (451 bp amplicon), the constitutively expressed housekeeping control, remained constant. (b) The quantitation of the data from three independent experiments (histobars represent the means, error bars denote standard deviations) by laser densitometry scans; all values are relative to untreated controls (n=3). bMQ denotes the 100-bp marker. Arrows on the left denote the sizes of marker bands in bp. Fig 1. PMID: 15451365.

Western Blot

Western Blot of Anti-Superoxide Dismutase (RABBIT) Antibody.

Western blot studies of SOD enzyme protein up-regulation in vitro. Primary rat cortical cultures were incubated with 1, 10, and 100 ng/ ml peptides for 5 h prior to analysis by gel electrophoresis and Western blots. Upper panels show the SDS gels; lower panels show the averages of three independent experiments (n=3) analyzed by laser densitometry scans (error bars denote standard deviations). Arrows on the left denote the sizes (kDa) of marker proteins. Up-regulation of all three enzyme proteins occurs following treatments with CMX-8933 and CMX-9236 peptides. Fig 3. PMID: 15451365.





Western Blot

Western Blot of Anti-Superoxide Dismutase (RABBIT) Antibody.

Western blot assays of up-regulation of SOD proteins in vivo. Sprague–Dawley rats were injected with 1 or 6 mg/kg of CMX-9236, and total cellular protein extracts were prepared from brain and heart tissue at 5 h post tail vein IV injections of peptide. Upper panels represent typical immunoblots for each protein assayed. The arrows on the left denote the sizes (kDa) of marker proteins. Lower panels show the quantitation of three independent experiments (histobars denote means, and error bars the standard deviations). The Western blot data show increases at 31kDa corresponding to the monomeric SOD-1 protein. Fig 4. PMID: 15451365.

References

- Ali II et al. Adropin modulates pancreatic cell proliferation and glutathione levels in an animal model of type 1 diabetes mellitus. *Animal Model Exp Med.* (2025)
- Lu L et al. Oxidative stress on the astrocytes in culture derived from a senescence accelerated mouse strain. *Neurochem Int.* (2008)
- Shashoua VE et al. New synthetic peptides can enhance gene expression of key antioxidant defense enzymes in vitro and in vivo. *Brain Res.* (2004)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.