Datasheet for ABIN361656

anti-SOD2 antibody

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Overview

Quantity:	100 µg
Target:	SOD2
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This SOD2 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA, Immunoprecipitation (IP), Immunofluorescence (IF), Immunocytochemistry (ICC)

Product Details

Immunogen:	Recombinant Rat Mn SOD Protein
Specificity:	Detects ~25 kDa.
Cross-Reactivity:	Chicken, Cow, Dog, Drosophila melanogaster, Guinea Pig, Hamster, Human, Invertebrate, Monkey, Mouse, Pig, Rabbit, Rat, Sea Squirt, Sheep, Squirrel, Xenopus laevis
Purification:	Protein A Purified

Target Details

Target:	SOD2
Alternative Name:	SOD2 (SOD2 Products)
Background:	Superoxide dismutase (SOD) is an endogenously produced intracellular enzyme present in almost every cell in the body (3). It works by catalyzing the dismutation of the superoxide

Target Details

	radical O2¯ to O2 and H2O2, which are then metabolized to H2O and O2 by catalase and glutathione peroxidase (2,5). In general, SODs play a major role in antioxidant defense mechanisms (4). There are two main types of SOD in mammalian cells. One form (SOD1) contains Cu and Zn ions as a homodimer and exists in the cytoplasm. The two subunits of 16 kDa each are linked by two cysteines forming an intra-subunit disulphide bridge (3). The second form (SOD2) is a manganese containing enzyme and resides in the mitochondrial matrix. It is a homotetramer of 80 kDa. The third form (SOD3 or EC-SOD) is like SOD1 in that it contains Cu and Zn ions, however it is distinct in that it is a homotetramer, with a mass of 30 kDA and it exists only in the extra-cellular space (7). SOD3 can also be distinguished by its heparin-binding capacity (1).
Gene ID:	24787
NCBI Accession:	NP_058747
UniProt:	P07895
Pathways:	Sensory Perception of Sound, Transition Metal Ion Homeostasis, Negative Regulation of intrinsic apoptotic Signaling

Application Details

Application Notes:	• WB (1:5000) • IHC (1:100) • ICC/IF (1:120) • optimal dilutions for assays should be determined by the user.
Comment:	0.5 µg/ml of ABIN361655 was sufficient for detection of Mn SOD in 20 µg of rat brain tissue extract by colorimetric immunoblot analysis using Goat anti-rabbit IgG:AP as the secondary antibody.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which

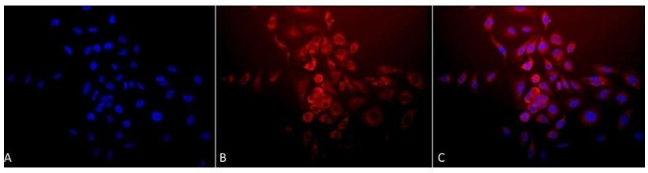
Handling

	should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	-20°C

Publications

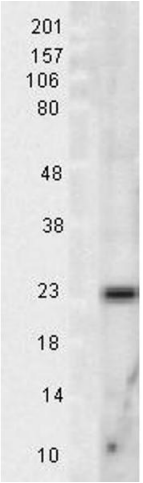
Product cited in:	Ekuni, Tomofuji, Irie, Kasuyama, Umakoshi, Azuma, Tamaki, Sanbe, Endo, Yamamoto, Nishida, Morita: "Effects of periodontitis on aortic insulin resistance in an obese rat model." in: **Laboratory investigation; a journal of technical methods and pathology**, Vol. 90, Issue 3, pp. 348-59, (2010) (PubMed).

Validation report #104331 for Multiplex Immunohistochemistry (mIHC)



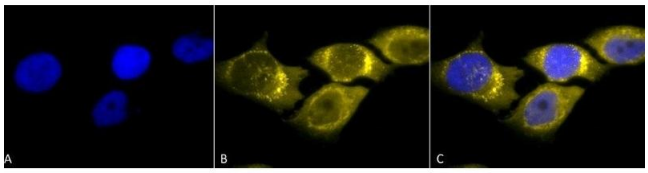
Immunocytochemistry

Image 1. Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-SOD (Mn) Polyclonal Antibody (ABIN361655 and ABIN361656). Tissue: Cervical cancer cell line (HeLa). Species: Human. Fixation: 2 % Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (Mn) Polyclonal Antibody (ABIN361655 and ABIN361656) at 1:120 for 12 hours at 4 °C. Secondary Antibody: APC Goat Anti-Rabbit (red) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Mitochondrion matrix. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD (Mn) Antibody. (C) Composite.



Western Blotting

Image 2. Mn SOD Rat tissue lysate 10ug Western Blotting 1 in 1000 copy.



Immunocytochemistry

Image 3. Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-SOD (Mn) Polyclonal Antibody (ABIN361655 and ABIN361656). Tissue: Cervical cancer cell line (HeLa). Species: Human. Fixation: 2 % Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (Mn) Polyclonal Antibody (ABIN361655 and ABIN361656) at 1:120 for 12 hours at 4 °C. Secondary Antibody: R-PE Goat Anti-Rabbit (yellow) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Mitochondrion matrix. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD (Mn) Antibody. (C) Composite.

Please check the product details page for more images. Overall 5 images are available for ABIN361656.