

Datasheet for ABIN2484755  
**anti-SOD2 antibody (Atto 488)**[Go to Product page](#)

## 4 Images

## Overview

Quantity:	100 µg
Target:	SOD2
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This SOD2 antibody is conjugated to Atto 488
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 ( <a href="#">SOD2 Products</a> )
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  $O_2^-$  to  $O_2$  and  $H_2O_2$ , which are then metabolized to  $H_2O$  and  $O_2$  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 ABIN2484755 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

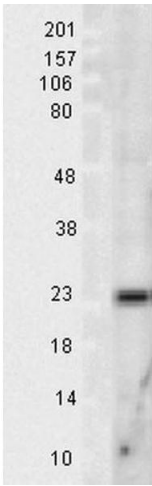
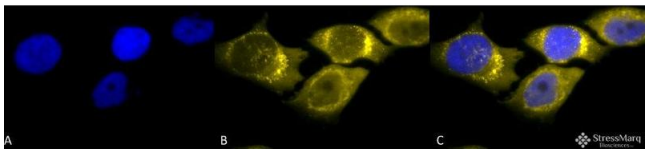
Handling

should be handled by trained staff only.

Storage: 4 °C

Storage Comment: Conjugated antibodies should be stored at 4°C

Images

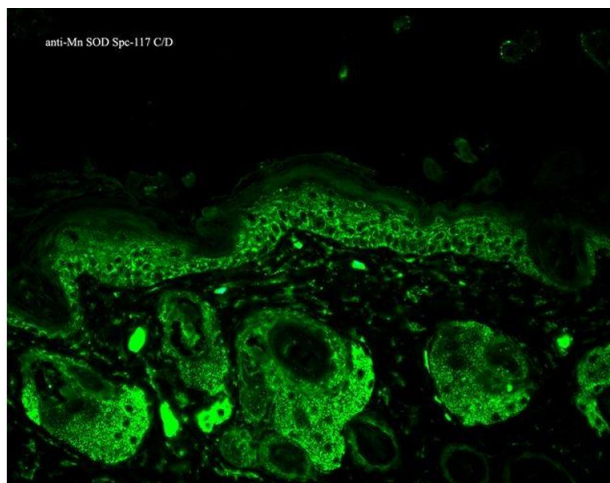


Immunofluorescence (fixed cells)

**Image 1.** Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-SOD (Mn) Polyclonal Antibody . Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (Mn) Polyclonal Antibody 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.

Western Blotting

**Image 2.** Western blot analysis of Rat Tissue lysates showing detection of SOD2 protein using Rabbit Anti-SOD2 Polyclonal Antibody . Load: 15 µg protein. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Rabbit Anti-SOD2 Polyclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Donkey Anti-Rabbit IgG: HRP for 1 hour at RT.



### Immunohistochemistry

**Image 3.** Immunohistochemistry analysis using Rabbit Anti-SOD2 Polyclonal Antibody . Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative Solution. Primary Antibody: Rabbit Anti-SOD2 Polyclonal Antibody at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:50 for 1 hour at RT. Localization: Mitochondrion matrix.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN2484755.