

**SOD1 (UbetaB) Antibody**  
Catalog # ASM10465**Specification**

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**SOD1 (UbetaB) Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">P00441</a>
Other Accession	<a href="#">CAG46542</a>
Host	<b>Rabbit</b>
Reactivity	<b>Human, Mouse, Rat</b>
Clonality	<b>Polyclonal</b>

**Description**

Rabbit Anti-Human SOD1 (UbetaB) Polyclonal

**Target/Specificity**

Recognizes a conformation specific epitope where the beta barrel is unfolded.

**Other Names**

USOD Antibody, Superoxide dismutase 1 Antibody, SOD Antibody, SOD1 unfolded beta barrel region Antibody

**Immunogen**

N-terminal region of SOD1, unfolded beta barrel region

**Purification**

Protein A Purified

Storage **-20°C****Storage Buffer**

PBS, 50% glycerol, 0.09% sodium azide

Shipping Temperature **Blue Ice or 4°C****Certificate of Analysis**

1 µg/ml of SPC-205 was sufficient for detection of the unfolded beta barrel of SOD1 by colorimetric dot blot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

**Cellular Localization**

Cytoplasm

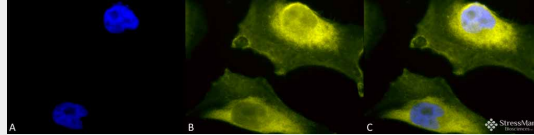
**SOD1 (UbetaB) Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

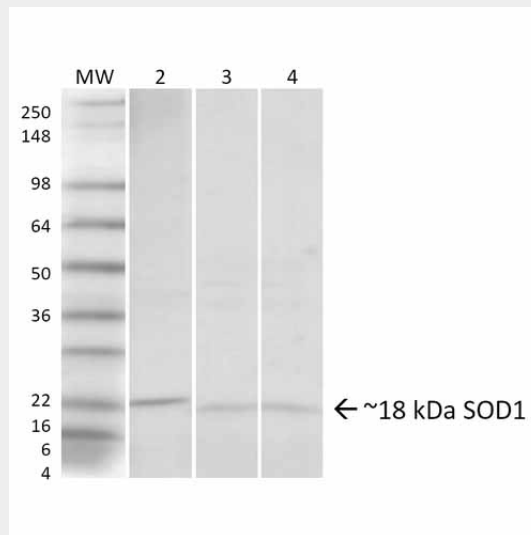
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

### SOD1 (UbetaB) Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-SOD1 (UBB) Polyclonal Antibody (ASM10465). Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD1 (UBB) Polyclonal Antibody (ASM10465) at 1:110 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: Cytoplasm. Nucleus. Mitochondrion. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD1 (UBB) Antibody. (C) Composite.



Western blot analysis of Human, Rat, Mouse HeLa cells, Brain, Lung showing detection of ~18 kDa SOD1 (UBB) protein using Rabbit Anti-SOD1 (UBB) Polyclonal Antibody (ASM10465). Lane 1: Molecular Weight Ladder. Lane 2: Human HeLa Cell Lysates. Lane 3: Rat Brain. Lane 4: Mouse Lung. Load: 20 µg. Primary Antibody: Rabbit Anti-SOD1 (UBB) Polyclonal Antibody (ASM10465) at 1:1000. Predicted/Observed Size: ~18 kDa.

### SOD1 (UbetaB) Antibody - Background

Superoxide dismutase (SOD) is an endogenously produced intracellular enzyme present in almost every cell in the body (2). It works by catalyzing the dismutation of the superoxide 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 (1,4). In general, SODs play a major role in antioxidant defense mechanisms (3). 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 (2). Misfolding of SOD1 has been implicated in Amyotrophic lateral sclerosis (ALS). Therefore conformation specific antibodies such as Anti-SOD1 (UbetaB), which targets an unfolded region of the beta barrel of SOD1, are useful for determining the conformation of SOD1 in affected tissues (5). This antibody can be used in conjunction with Anti-SOD1 (EDI) (SPC-206D) which detects an exposed dimer interface (EDI) of SOD1.

**SOD1 (UbetaB) Antibody - References**

1. Barrister J.V., et al. (1987). Crit. Rev. Biochem. 22:111-180.
2. Furukawa Y., and O'Halloran T. (2006) Antioxid Redox Signal. 8(5-6):847-67.
3. Gao B., et al. (2003) Am J Physiol Lung Cell Mol Physiol. 284:L917-L925.
4. Hassan H.M. (1988) Free Radical Biol. Med. 5:377-385.
5. Kerman A., et al. (2010) Acta Neuropathol. 119:335-344.