

**SOD (EC) Antibody**  
Catalog # ASM10390

**Specification**

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**SOD (EC) Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">P08294</a>
Other Accession	<a href="#">P08294</a>
Host	<b>Rabbit</b>
Reactivity	<b>Human, Mouse, Rat</b>
Clonality	<b>Polyclonal</b>

**Description**

Rabbit Anti-Human SOD (EC) Polyclonal

**Target/Specificity**

Detects extracellular SOD ~35kDa.

**Other Names**

EC SOD antibody, EC-SOD antibody, Extracellular superoxide dismutase [Cu Zn] antibody, Extracellular superoxide dismutase [Cu-Zn] antibody, Extracellular superoxide dismutase antibody, Extracellular superoxide dismutase precursor antibody, MGC20077 antibody, SOD 3 antibody, SOD3 antibody, SODE\_HUMAN antibody, Superoxide dismutase 3 extracellular antibody

**Immunogen**

Peptide corresponding to AA 227-236 of human EC SOD

**Purification**

Peptide Affinity Purified

Storage **-20°C**

**Storage Buffer**

PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature **Blue Ice or 4°C**

**Certificate of Analysis**

1 µg/ml of SPC-124 was sufficient for detection of ECSOD in 20 µg of Hela lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

**Cellular Localization**

Extracellular Space

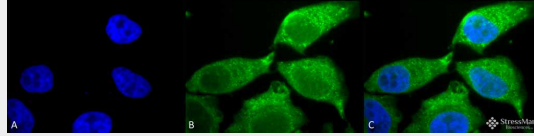
**SOD (EC) Antibody - Protocols**

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

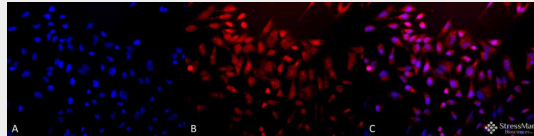
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

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

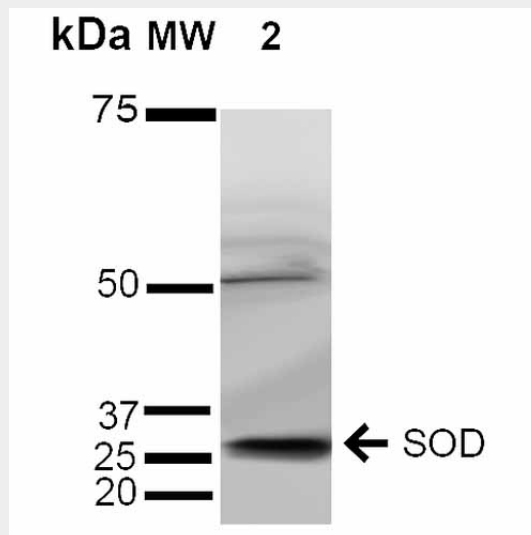
### SOD (EC) Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-SOD (EC) Polyclonal Antibody (ASM10390). Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (EC) Polyclonal Antibody (ASM10390) at 1:100 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: Cytoplasm. Golgi lumen. Exosome. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD (EC) Antibody. (C) Composite.



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-SOD (EC) Polyclonal Antibody (ASM10390). Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (EC) Polyclonal Antibody (ASM10390) at 1:100 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: Cytoplasm. Golgi lumen. Exosome. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD (EC) Antibody. (C) Composite.



Western blot analysis of Human Cervical Cancer cell lysates (HeLa) showing detection of ~35 kDa SOD (EC) protein using Rabbit Anti-SOD (EC) Polyclonal Antibody (ASM10390). Lane 1: Molecular Weight Ladder (MW). Lane 2: Human Cervical Cancer cell lysates (HeLa). Load: 15 µg. Block: 5% Skim Milk in 1X TBST. Primary Antibody: Rabbit Anti-SOD (EC) Polyclonal Antibody (ASM10390) at 1:1000 for 2 hours at RT. Secondary Antibody: Goat Anti-Rabbit HRP:lgG at 1:2000 for 60 min at RT. Color Development: ECL solution for 5 min at RT. Predicted/Observed Size: ~35 kDa. Other

Band(s): 50 kDa.

### **SOD (EC) Antibody - 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 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 three 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 (6). SOD3 can also be distinguished by its heparin-binding capacity (1).

### **SOD (EC) Antibody - References**

1. Adachi T., et al. (1992) Clin Chim Acta. 212: 89-102.
2. Barrister J.V., et al. (1987). Crit. Rev. Biochem. 22:111-180.
3. Furukawa Y., and O'Halloran T. (2006) Antioxidants & Redox Signaling. 8(5): 6.
4. Gao B., et al. (2003) Am J Physiol Lung Cell Mol Physiol 284: L917-L925.
5. Hassan H.M. (1988) Free Radical Biol. Med. 5: 377-385.
6. Wispe J.R., et al. (1989) BBA. 994: 30-36.
7. Regan, E. et al. (2005) Arthritis & Rheumatism 52(11): 3479-3491