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SOD (EC) Antibody
Catalog # ASM10390

Specification

SOD (EC) Antibody - Product Information

Application	**WB, ICC**
Primary Accession	P08294
Other Accession	P08294
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**

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	**-20ºC**

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

Shipping Temperature	**Blue Ice or 4ºC**

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

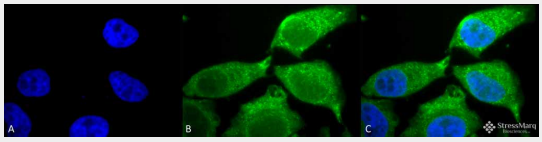
SOD (EC) Antibody - Protocols

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

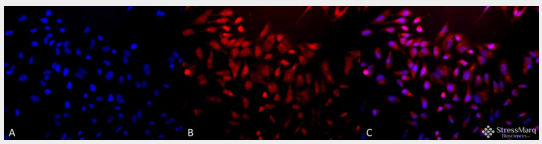
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry

- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- 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.



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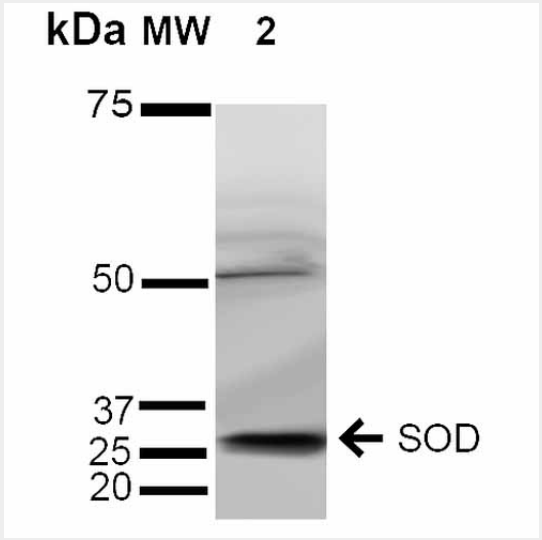

Western blot analysis of Human Cervical Cancer cell lysates (HeLa) showing detection of ~35 kDa SOD (EC) protein using Rabbit Anti-SOD (EC) Polyclonal Antibody (ASM10390). Lane 1: Molecular Weight Ladder (MW). Lane 2: Human Cervical Cancer cell lysates (HeLa). Load: 15 µg. Block: 5% Skim Milk in 1X TBST. Primary Antibody: Rabbit Anti-SOD (EC) Polyclonal Antibody (ASM10390) at 1:1000 for 2 hours at RT. Secondary Antibody: Goat Anti-Rabbit HRP:IgG 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 $O2^-$ 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 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. FurukawaY., and O'Halloran T. (2006) Antioxidants & Redo 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