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SOD (EC) Antibody
SOD (EC) Antibody, Clone 4GG11G6
Catalog # ASM10100

Specification

SOD (EC) Antibody - Product Information

Application	**WB, IHC, ICC, E**
Primary Accession	P08294
Other Accession	NP_003093.2
Host	**Mouse**
Isotype	**IgG1 Kappa**
Reactivity	**Human, Mouse, Rat, Guinea Pig**
Clonality	**Monoclonal**

Description
Mouse Anti-Human SOD (EC) Monoclonal IgG1 Kappa

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
Human extracellular SOD purified from aortas

Purification
Protein G 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 SMC-167 was sufficient for detection of EC-SOD in 20 µg of human cartilage lysate by colorimetric immunoblot analysis using Goat anti-mouse 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

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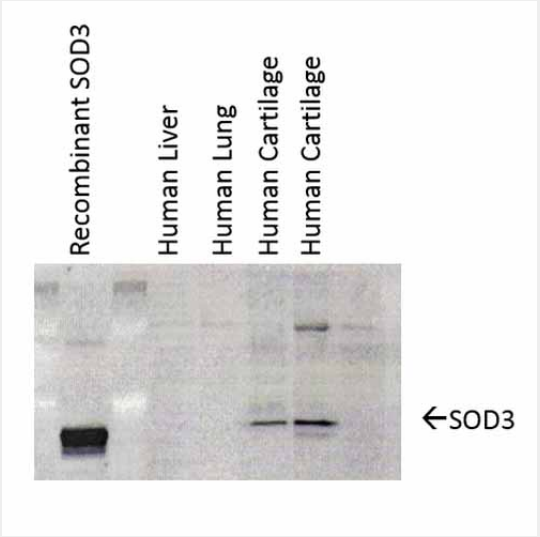
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SOD (EC) Antibody - Images

Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-SOD3 Monoclonal Antibody, Clone 4GG11G6 (ASM10100). Tissue: cartilage. Species: Human. Primary Antibody: Mouse Anti-SOD3 Monoclonal Antibody (ASM10100) at 1:1000.



Western Blot analysis of Human cartilage lysates showing detection of SOD3 protein using Mouse Anti-SOD3 Monoclonal Antibody, Clone 4GG11G6 (ASM10100). Primary Antibody: Mouse Anti-SOD3 Monoclonal Antibody (ASM10100) at 1:1000. Left: Control, Middle: Young cartilage, Right: Cartilage sample with osteoarthritis-arthritis..

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

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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