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SOD4/Superoxide Dismutase 4 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP58107

Specification

SOD4/Superoxide Dismutase 4 Polyclonal Antibody - Product Information

Application	**IHC-F, IF, E**
Primary Accession	O14618
Reactivity	**Rat, Pig, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**29 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human SOD4**
Epitope Specificity	**201-274/274**
Isotype	**IgG**
Purity	
affinity purified by Protein A	
Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Cytoplasm.**
SIMILARITY	**In the C-terminal section; belongs to the Cu-Zn superoxide dismutase family. Contains 1 HMA domain.**
SUBUNIT	**Homodimer, and heterodimer with SOD1. Interacts with COMMD1. Interacts with XIAP/BIRC4.**
Post-translational modifications	**Ubiquitinion by XIAP/BIRC4 leads to enhancement of its chaperone activity toward its physiologic target, SOD1, rather than proteasomal degradation. XIAP/BIRC4 preferentially ubiquitinates at Lys-241.**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
Copper chaperone for superoxide dismutase specifically delivers Cu to copper/zinc superoxide dismutase and may activate copper/zinc superoxide dismutase through direct insertion of the Cu cofactor. [provided by RefSeq, Jul 2008] Superoxide dismutase (SOD) is an antioxidant enzyme involved in the defense system against reactive oxygen species (ROS). SOD catalyzes the dismutation reaction of superoxide radical anion (O2-) to hydrogen peroxide, which is then catalyzed to innocuous O2 and H2O by glutathione peroxidase and catalase. Several classes of SOD have been identified. These include intracellular copper, zinc SOD (Cu, Zn-SOD/SOD-1), mitochondrial manganese SOD (Mn-SOD/SOD-2) and extracellular Cu, Zn-SOD (EC-SOD/SOD-3). SOD1 is found in all eukaryotic species as a homodimeric 32 kDa enzyme containing one each of Cu and Zn ion per subunit. The manganese containing 80 kDa tetrameric enzyme SOD2, is located in the mitochondrial matrix in close proximity to a primary endogenous source of superoxide, the mitochondrial respiratory chain. SOD3 is a heparin-binding multimer of disulfide-linked dimers, primarily expressed in human lungs, vessel walls and airways. SOD4 is a copper chaperone for

superoxide dismutase (CCS), which specifically delivers Cu to copper/zinc superoxide dismutase. CCS may activate copper/zinc superoxide dismutase through direct insertion of the Cu cofactor.

SOD4/Superoxide Dismutase 4 Polyclonal Antibody - Additional Information

Gene ID 9973

Other Names
Copper chaperone for superoxide dismutase, Superoxide dismutase copper chaperone, CCS

Target/Specificity
Ubiquitous.

Dilution
IHC-F~~N/A<br \>IF~~1:50~200<br \>E~~N/A

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

SOD4/Superoxide Dismutase 4 Polyclonal Antibody - Protein Information

Name CCS (HGNC:1613)

Function
Delivers copper to copper zinc superoxide dismutase (SOD1).

Cellular Location
Cytoplasm.

Tissue Location
Ubiquitous.

SOD4/Superoxide Dismutase 4 Polyclonal 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

SOD4/Superoxide Dismutase 4 Polyclonal Antibody - Images