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SOD4/Superoxide Dismutase 4 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP58107

Product Information

Application	IHC-F, IF, E
Primary Accession	O14618
Reactivity	Rat, Pig, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	29041
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.

Additional Information

Gene ID	9973
Other Names	Copper chaperone for superoxide dismutase, Superoxide dismutase copper chaperone, CCS
Target/Specificity	Ubiquitous.
Dilution	IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C 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 °C.

Protein Information

Name	CCS (HGNC:1613)
Function	Delivers copper to copper zinc superoxide dismutase (SOD1).
Cellular Location	Cytoplasm.
Tissue Location	Ubiquitous.