10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-SOD1 Picoband Antibody

Catalog # ABO12093

Product Information

Application	WB
Primary Accession	P00441
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Superoxide dismutase [Cu-Zn](SOD1) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	6647
Other Names	Superoxide dismutase [Cu-Zn], 1.15.1.1, Superoxide dismutase 1, hSod1, SOD1
Calculated MW	15936
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm. Nucleus. Predominantly cytoplasmic; the pathogenic variants ALS1 Arg-86 and Ala-94 gradually aggregates and accumulates in mitochondria.
Source	Eukaryota
Protein Name	Superoxide dismutase [Cu-Zn]
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of Human SOD1 (116-146aa RTLVVHEKADDLGKGGNEESTKTGNAGSRLA), different from the related mouse and rat sequences by two amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities	Belongs to the Cu-Zn superoxide dismutase family.

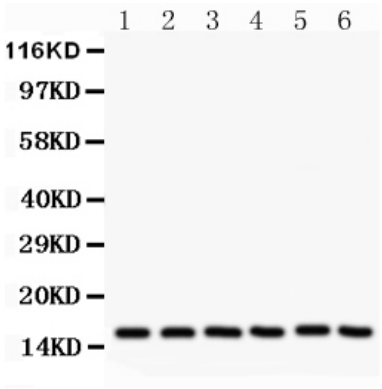
Protein Information

Name	SOD1 (HGNC:11179)
Function	Destroys radicals which are normally produced within the cells and which are toxic to biological systems (PubMed:18948262, PubMed:24140062). Catalyzes the oxidation of hydrogen sulfide (H2S) to sulfate, playing an important role in detoxifying H2S and limiting the accumulation of reactive sulfur species (RSS) such as persulfides and polysulfides (PubMed:36630448).
Cellular Location	Cytoplasm. Nucleus. Note=Predominantly cytoplasmic; the pathogenic variants ALS1 Arg-86 and Ala-94 gradually aggregates and accumulates in mitochondria.

Background

Superoxide dismutases (SOD) are a class of enzymes that catalyze the dismutation of superoxide into oxygen and hydrogen peroxide. As such, they are an important antioxidant defense in nearly all cells exposed to oxygen. One of the exceedingly rare exceptions is Lactobacillus plantarum and related lactobacilli, which use a different mechanism.Cu,Zn-SOD was found widely distributed in the cell cytosol and in the cell nucleus, consistent with it being a soluble cytosolic protein. Mitochondria and secretory compartments did not label for this protein. In human cells, peroxisomes showed a labeling density slightly less than that of cytoplasm.

Images



Anti- SOD1 Picoband antibody, ABO12093, Western blottingAll lanes: Anti SOD1 (ABO12093) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Mouse Brain Tissue Lysate at 50ugLane 3: Human Placenta Tissue Lysate at 50ugLane 4: COLO320 Whole Cell Lysate at 40ugLane 5: HELA Whole Cell Lysate at 40ugLane 6: MCF-7 Whole Cell Lysate at 40ugPredicted bind size: 16KDObserved bind size: 16KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.