



Anti-SOD1 polyclonal antibody (DPAB2594RH)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

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| Product Overview | Rabbit polyclonal to human superoxide dismutase 1. |
| Antigen Description | 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 (O ₂ ⁻) hydrogen peroxide, which is then catalyzed to innocuous O ₂ and H ₂ O 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). SOD-1 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 80kDa tetrameric enzyme SOD2, is located in the mitochondrial matrix in close proximity to a primary endogenous source of superoxide, the mitochondrial respiratory chain. SOD-3 is a heparin-binding multimer of disulfide-linked dimers, primarily expressed in human lungs, vessel walls and airways. SOD-4 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. |
| Immunogen | Recombinant human protein purified from E.coli. |
| Isotype | IgG |
| Source/Host | Rabbit |
| Species Reactivity | Human |
| Conjugate | Unconjugated |
| Applications | WB, IP, IHC-P |
| Cellular Localization | Cytoplasm |
| Positive Control | HeLa cells |

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| Format | HEPES with 0.15M NaCl, 0.01% BSA, 0.03% sodium azide, and 50% glycerol. |
| Size | 100 µl |
| Preservative | 0.03% Sodium Azide |
| Storage | Store for 1 year at -20 °C from date of shipment. |

GENE INFORMATION

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| Gene Name | SOD1 superoxide dismutase 1, soluble [Homo sapiens] |
| Synonyms | SOD1; superoxide dismutase 1, soluble; ALS; SOD; ALS1; IPOA; hSod1; homodimer; superoxide dismutase [Cu-Zn]; SOD, soluble; OTTHUMP00000107278; OTTHUMP00000107279; indophenoloxidase A; Cu/Zn superoxide dismutase; superoxide dismutase, cystolic; amyotrophic lateral sclerosis (adult); EC 1.15.1.1; Superoxide dismutase 1 |
| Entrez Gene ID | 6647 |
| Protein Refseq | NP_000445 |
| UniProt ID | P00441 |
| Chromosome Location | 21q22.1; 21q22.11 |
| Pathway | Amyotrophic lateral sclerosis (ALS); FOXA1 transcription factor network; Folate Metabolism; Hemostasis; Huntington's disease; Oxidative Stress; Peroxisome; Platelet Activation; Platelet degranulation; Prion diseases; Response to elevated platelet cytosolic Ca2+; Selenium Pathway |
| Function | chaperone binding; copper ion binding; metal ion binding; oxidoreductase activity; protein binding; protein homodimerization activity; protein phosphatase 2B binding; superoxide dismutase activity; zinc ion binding |