

Product datasheet for **TA326384**

Superoxide Dismutase 1 (SOD1) Rabbit Polyclonal Antibody [Clone ID: N/A]

Product data:

Product Type:	Primary Antibodies
Clone Name:	N/A
Applications:	IF, WB
Recommended Dilution:	0.2ug/ml was sufficient for detection of Cu/Zn SOD in 20ug of HeLa cell lysate
Reactivity:	Human, Rat, Mouse, Bovine, Monkey, Dog, Hamster, Rabbit, Pig, Sheep, Xenopus, Coral
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Human Cu/Zn SOD
Formulation:	PBS pH7.0, 50% glycerol, 0.09% sodium azide
Concentration:	lot specific
Purification:	Affinity (antigen) Purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	superoxide dismutase 1, soluble
Database Link:	NP_000445 Entrez Gene 20655 Mouse Entrez Gene 24786 Rat Entrez Gene 403559 Dog Entrez Gene 574096 Monkey Entrez Gene 6647 Human P00441



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Background:

Superoxide dismutase (SOD) is an endogenously produced intracellular enzyme present in almost every cell in the body . It works by catalyzing the dismutation of the superoxide radical O_2^- to O_2 and H_2O_2 , which are then metabolized to H_2O and O_2 by catalase and glutathione peroxidase . In general, SODs play a major role in antioxidant defense mechanisms . There are two main 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 . 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 extracellular space. SOD3 can also be distinguished by its heparin-binding capacity .

Synonyms:

ALS; ALS1; HEL-S-44; homodimer; hSod1; IPOA; SOD

Note:

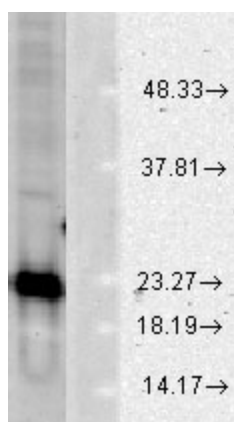
Detects a ~23kDa (human) and 19kDa (other species) proteins corresponding to the molecular mass of Cu/Zn superoxide dismutase (SOD) on SDS PAGE immunoblots.

Protein Families:

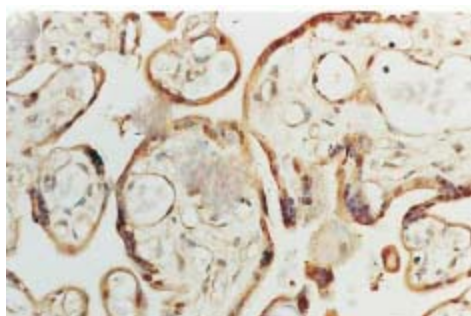
Druggable Genome

Protein Pathways:

Amyotrophic lateral sclerosis (ALS), Huntington's disease, Prion diseases

Product images:

Western blot analysis of Cu/Zn SOD in a human cell line mix, using a 1:1000 dilution of the antibody



ICC localization of human Cu/Zn SOD in the syncytiotrophoblast of human placenta. Courtesy of Joan Telfer, University of Glasgow, UK.