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SOD1, Biotinylated

Peptide-affinity purified goat antibody
Catalog # AF2022b

Product Information

Application	WB, Pep-ELISA
Primary Accession	P00441
Other Accession	NP_000445, 6647, 20655 (mouse), 24786 (rat)
Reactivity	Human, Mouse, Rat
Predicted	Dog
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Calculated MW	15936

Additional Information

Gene ID	6647
Other Names	Superoxide dismutase [Cu-Zn], 1.15.1.1, Superoxide dismutase 1, hSod1, SOD1
Dilution	WB~~1:1000 Pep-ELISA~~N/A
Format	0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SOD1, Biotinylated is for research use only and not for use in diagnostic or therapeutic procedures.

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.

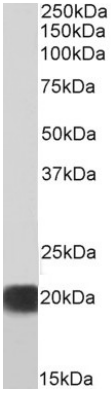
Background

The protein encoded by this gene binds copper and zinc ions and is one of two isozymes responsible for destroying free superoxide radicals in the body. The encoded isozyme is a soluble cytoplasmic protein, acting as a homodimer to convert naturally-occuring but harmful superoxide radicals to molecular oxygen and hydrogen peroxide. The other isozyme is a mitochondrial protein. Mutations in this gene have been implicated as causes of familial amyotrophic lateral sclerosis. Rare transcript variants have been reported for this gene.

References

Chromosome 9p21 in amyotrophic lateral sclerosis in Finland: a genome-wide association study. Laaksovirta H, et al. Lancet Neurol, 2010 Oct. PMID 20801718.
Knock-down of superoxide dismutase 1 sensitizes cisplatin-resistant human ovarian cancer cells. Kim JW, et al. Anticancer Res, 2010 Jul. PMID 20682985.
Genetics and clinical characteristics of keratoconus. Stabuc-Silih M, et al. Acta Dermatovenerol Alp Panonica Adriat, 2010. PMID 20664914.
Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.
Mutant superoxide dismutase 1-induced IL-1beta accelerates ALS pathogenesis. Meissner F, et al. Proc Natl Acad Sci U S A, 2010 Jul 20. PMID 20616033.

Images



Biotinylated EB07208 (0.3 µg/ml) staining of HEK293 lysate (35 µg protein in RIPA buffer), exactly mirroring its parental non-biotinylated product. Primary incubation was 1 hour. Detected by chemiluminescence, using streptavidin-HRP and using NAP blocker as

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