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Product datasheet for PH300725

Superoxide Dismutase 1 (SOD1) (NM_000454) Human Mass Spec Standard

Product data:

Product Type:	Mass Spec Standards
Description:	SOD1 MS Standard C13 and N15-labeled recombinant protein (NP_000445)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC200725
Predicted MW:	15.9 kDa
Protein Sequence:	>RC200725 protein sequence Red=Cloning site Green=Tags(s) MATKAVCVLKGDGPVQGIINFEQKESNGPVKVWGSIKGLTEGLHGFHVHEFGDNTAGCTSAGPHFNPLSR KHGGPKDEERHVGDLGNVTADKDGVADVSIEDSVISLSGDHCIIGRTLVVHEKADDLGKGGNEESTKTGN AGSRLACGVIGIAQ TRTRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- 13C6, 15N4]-L-Arginine and [U- 13C6, 15N2]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	NP_000445
RefSeq Size:	981
RefSeq ORF:	462
Synonyms:	ALS; ALS1; HEL-S-44; homodimer; hSod1; IPOA; SOD; STAHP
Locus ID:	6647
UniProt ID:	P00441, V9HWC9

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Cytogenetics: 21q22.11

Summary: 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. In addition, this protein contains an antimicrobial peptide that displays antibacterial, antifungal, and anti-MRSA activity against E. coli, E. faecalis, S. aureus, S. aureus MRSA LPV+, S. agalactiae, and yeast C. krusei. Mutations in this gene have been implicated as causes of familial amyotrophic lateral sclerosis. Rare transcript variants have been reported for this gene. [provided by RefSeq, Jul 2020]

Protein Families: Druggable Genome

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

Product images:

Coomassie blue staining of purified SOD1 protein (Cat# [TP300725]). The protein was produced from HEK293T cells transfected with SOD1 cDNA clone (Cat# [RC200725]) using MegaTran 2.0 (Cat# [TT210002]).

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