

SOD-1 (C-17): sc-8637

BACKGROUND

Cu-Zn superoxide dismutase-1 (SOD-1) is a well characterized cytosolic scavenger of oxygen free radicals that requires copper and zinc binding to potentiate its enzymatic activity. Enzymatically, SOD-1 facilitates the dismutation of oxygen radicals to hydrogen peroxide, and it also catalyzes prooxidant reactions, which include the peroxidase activity and hydroxyl radical generating activity. SOD-1 is ubiquitously expressed in somatic cells and functions as a homodimer. Defects in the gene encoding SOD-1 have been implicated in the progression of neurological diseases, including amyotrophic lateral sclerosis (ALS), a neurodegenerative disease characterized by the loss of spinal motor neurons, Down syndrome and Alzheimer's disease. In familial ALS, several mutations in SOD-1 predominate, and they result in the loss of zinc binding and the loss of scavenging activity of SOD-1 and correlate with an increase in neurotoxicity and motor neuron death.

CHROMOSOMAL LOCATION

Genetic locus: SOD1 (human) mapping to 21q22.11; Sod1 (mouse) mapping to 16 C3.3.

SOURCE

SOD-1 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SOD-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8637 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SOD-1 (C-17) is recommended for detection of SOD-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SOD-1 (C-17) is also recommended for detection of SOD-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SOD-1 siRNA (h): sc-36523, SOD-1 siRNA (m): sc-36522, SOD-1 shRNA Plasmid (h): sc-36523-SH, SOD-1 shRNA Plasmid (m): sc-36522-SH, SOD-1 shRNA (h) Lentiviral Particles: sc-36523-V and SOD-1 shRNA (m) Lentiviral Particles: sc-36522-V.

Molecular Weight of SOD-1: 23 kDa.

Positive Controls: Hs68 cell lysate: sc-2230, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

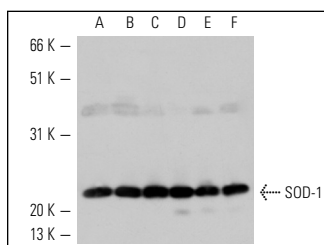
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

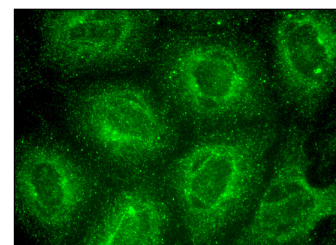
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



SOD-1 (C-17): sc-8637. Western blot analysis of SOD-1 expression in HeLa (A), Jurkat (B), Hep G2 (C), DU 145 (D), Hs68 (E) and CCD-1064Sk (F) whole cell lysates.



SOD-1 (C-17): sc-8637. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization

SELECT PRODUCT CITATIONS

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- Grdovic, N., et al. 2012. The protective effect of a mix of Lactarius deterrimus and Castanea sativa extracts on streptozotocin-induced oxidative stress and pancreatic β -cell death. *Br. J. Nutr.* 108: 1163-1176.
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Try **SOD-1 (G-11): sc-17767** or **SOD-1 (C-8): sc-515404**, our highly recommended monoclonal alternatives to SOD-1 (C-17). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **SOD-1 (G-11): sc-17767**.