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's 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.

SOD-1 (G-11): sc-17767

**SOURCE**
SOD-1 (G-11) is a mouse monoclonal antibody raised against amino acids 1-154 of SOD-1 of human origin.

**PRODUCT**
Each vial contains 200 µg IgGκ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SOD-1 (G-11) is available conjugated to agarose (sc-17767 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17767 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17767 PE), fluorescein (sc-17767 FITC), Alexa Fluor® 488 (sc-17767 AF488), Alexa Fluor® 546 (sc-17767 AF546), Alexa Fluor® 594 (sc-17767 AF594) or Alexa Fluor® 647 (sc-17767 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17767 AF680) or Alexa Fluor® 790 (sc-17767 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**APPLICATIONS**
SOD-1 (G-11) is recommended for detection of SOD-1 of human origin by Western Blotting (starting dilution 1:5,000, dilution range 1:5,000-1:10,000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of SOD-1: 23 kDa.

Positive Controls: CCD-1084Sk cell lysate: sc-2263, Jurkat whole cell lysate: sc-2204 or Hs68 cell lysate: sc-2230.

**CHROMOSOMAL LOCATION**
Genetic locus: SOD1 (human) mapping to 21q22.11.

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

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**
For research use only, not for use in diagnostic procedures.