Product Datasheet

SOD2 Antibody

Catalog No: CY5977 Reactivity: Human Mouse Rat

Isotype: Rabbit IgG Applications: WB IHC

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Information

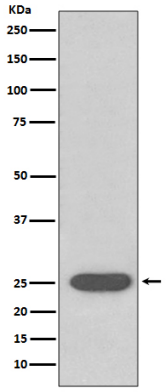
UniProt ID: P04179
All Names: SOD2; IPOB; MNSOD; MVCD6;
Form: Liquid
Storage instructions: Store at +4˚ C short term. Store at -20˚ C long term. Avoid freeze / thaw cycle.
Storage buffer: pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity: Affinity-chromatography
Immunogen: A synthesized peptide
Molecular Wt.: 25 kDa

Application

WB 1:500~1:2000
IHC 1:50~1:200

Background

The superoxide dismutase family is composed of three metalloenzymes (SOD-1, SOD-2 and SOD-3) that catalyze the oxido-reduction of reactive oxygen species (ROS) such as superoxide anion. The SOD-2 precursor is a 222 amino acid protein that is encoded by nuclear chromatin, synthesized in the cytosol and imported posttranslationally into the mitochondrial matrix. Unlike SOD-1, which is a homodimeric cytosolic Cu-Zn enzyme, SOD-2 is a homotetrameric manganese enzyme (also known as MnSOD) that functions in the mitochondrion. ROS are implicated in a wide range of degenerative processes, including Alzheimer's disease, Parkinson's disease and ischemic heart disease. Homozygous mutant mice, which lack SOD-2, exhibit dilated cardiomyopathy, accumulation of lipid in liver and skeletal muscle, metabolic acidosis, oxidative DNA damage and respiratory chain deficiencies in heart and skeletal muscle. Polymorphisms in the SOD-2 gene have also been implicated in nonfamilial, idiopathic, dilated cardiomyopathy in humans.



Western blot analysis of SOD2 expression in Rat brain lysate.