

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human SOD3/EC-SOD in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human SOD2, recombinant mouse (rm) SOD1, or rmSOD3 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 713707
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human SOD3/EC-SOD Trp19-Ala240 Accession # P08294
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Superoxide Dismutases (SODs), originally identified as Indophenoloxidase (IPO), are enzymes that catalyze the conversion of naturally-occurring, but harmful, superoxide radicals into molecular oxygen and hydrogen peroxide. Superoxide Dismutase 3 (SOD3) also known as extracellular (EC) SOD, is tetrameric glycoprotein with an apparent subunit molecular weight of about 30 kDa. Three isoenzymes of SOD have been identified and are functionally related but have very modest sequence homology. SOD3 shares 23% and 17% sequence identity with SOD1 and SOD2, respectively. Human SOD3 shares ~64% sequence homology with mouse and rat SOD3. Like SOD1, SOD3 binds one Cu²⁺ and Zn²⁺ ions per subunit but differs in sequence and tissue distribution. SOD3 is a secretory protein and is synthesized with a putative 18-amino acid signal peptide preceding the 222 amino acids in the mature SOD3. SOD3 is found in plasma, lymph, and synovial fluid as well as in tissues. SOD3 binds on the surface of endothelial cells through the heparan sulfate proteoglycan and eliminates the oxygen radicals from the NADP-dependent oxidative system of neutrophils.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.