Catalog No. LF-MA0042

MONOCLONAL ANTIBODY

Anti-Superoxide Dismutase 4 (3A1)

Background : Superoxide dismutase (SOD) is an antioxidant enzyme involved in the defense system against reactive oxygen species (ROS). SOD catalyzes the dismutation reaction of superoxide radical anion (O_2^-) to hydrogen peroxide, which is then catalyzed to innocuous O_2 and H_2O by glutathione peroxidase and catalase. Several classes of SOD have been identified. These include intracellular copper, zinc SOD (Cu, Zn-SOD/SOD-1), mitochondrial manganese SOD (Mn-SOD/SOD-2) and extracellular Cu, Zn-SOD (EC-SOD/SOD-3) (1). SOD1 is found in all eukaryotic species as a homodimeric 32 kDa enzyme containing one each of Cu and Zn ion per subunit (2). The manganese containing 80 kDa tetrameric enzyme SOD2, is located in the mitochondrial matrix in close proximity to a primary endogenous source of superoxide, the mitochondrial respiratory chain (3). SOD3 is a heparin-binding multimer of disulfide-linked dimers, primarily expressed in human lungs, vessel walls and airways (4). SOD4 is a copper chaperone for superoxide dismutase (CCS), which specifically delivers Cu to copper/zinc superoxide dismutase. CCS may activate copper/zinc superoxide dismutase through direct insertion of the Cu cofactor.

Immunogen : Recombinant human protein purified from *E.coli*

Host : Mouse

Clone number : 3A1

Isotype : IgG2a, k

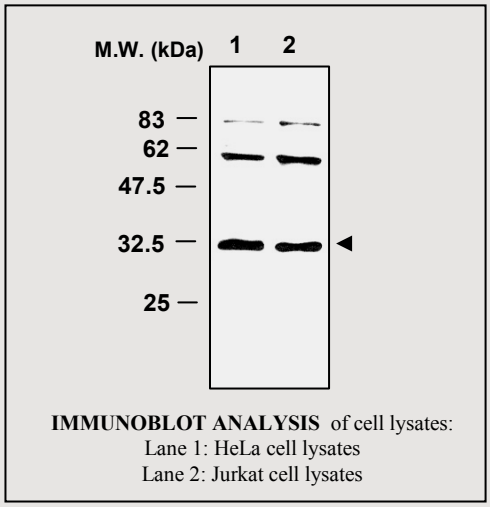
Size : 100ul

Composition : PBS containing 50% glycerol

Positive control : HeLa cell lysates

Storage : Store for 1 year at -20°C from date of shipment

Species cross reactivity		
Human	**Mouse**	**Rat**
+	-	-



IMMUNOBLOT ANALYSIS of cell lysates:
Lane 1: HeLa cell lysates
Lane 2: Jurkat cell lysates

Applications :
ELISA
Westerm Blotting (1:2000)
Immunoprecipitation (2ul/400ul cell lysates)
Immunohistochemistry

Background Reference :

1) Kuninaka, S. et al. (2000) Br. J. Cancer. 83, 928-934.
2) Strange, R.W. et al. (2003) J. Mol. Biol. 328, 877-891.
3) Weisiger, R. A., and Fridovich, I. (1973) J. Biol. chem. 248, 3582-3592.
4) Enghild, J. J. et al. (1999) Biochem J. 317, 51-57.

Gentaur Molecular Products
Voortstraat 49
1910 Kampenhout, Belgium
http://www.gentaur-worldwide.com