



Anti-Superoxide Dismutase 3 (1H12)

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.

Species cross reactivity

Human	Mouse	Rat
+	NT	NT

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

Host : Mouse

Clone number : 1H12

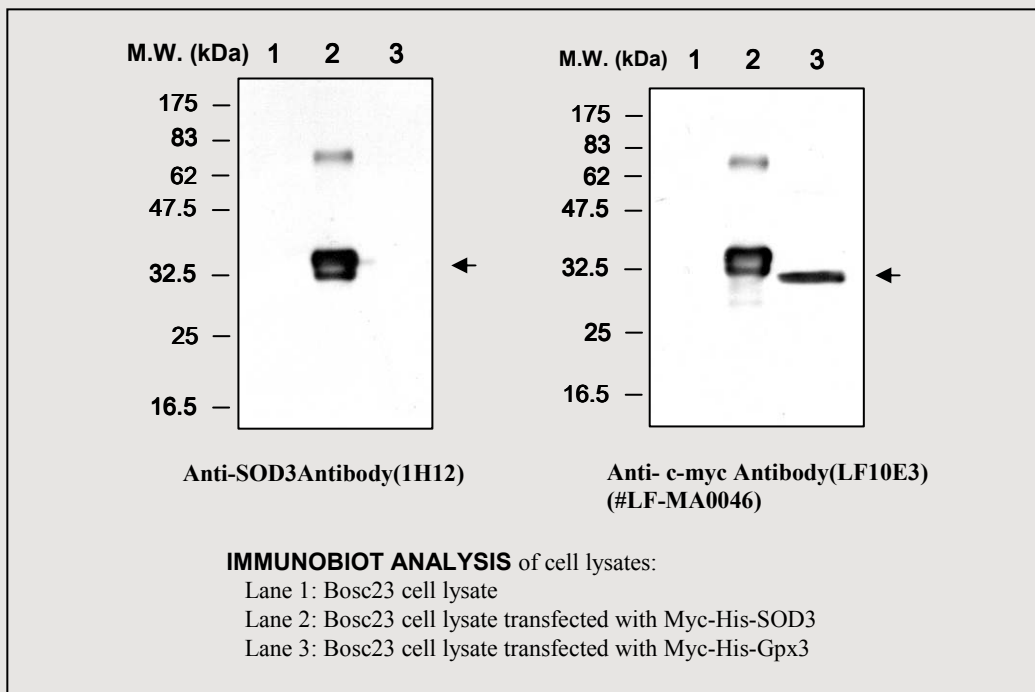
Isotype : IgG2b, k

Size : 100 μ l

Composition : PBS containing 50% glycerol

Positive control : Bosc23 cell lysate transfected with Myc-His-SOD3

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



Applications :

ELISA

Western blotting (1:2000)

Immunoprecipitation(1 μ l/400 μ l cell lysate)

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.

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