

**TECHNICAL DATA SHEET****Catalog # MS112****Complex I subunit NDUFS3 monoclonal antibody**

Rev.1

**LOT #:****COMPONENTS:** 100 µg monoclonal antibody**APPLICATIONS:** Western blotting**CLONE ID OF MONOCLONAL ANTIBODY (mAb):** 17D950C9H11**SPECIES CROSS-REACTIVITY:** human, bovine, rat, mouse, zebrafish, *Drosophila melanogaster*, and *C. elegans* (+ weaker 60 kDa band)**HOST SPECIES AND ISOTYPE:** Mouse IgG2a, κ**IMMUNOGEN:** Bovine Heart Complex I**CONCENTRATION:** 1 mg/mL in HEPES-Buffered Saline (HBS) with 0.02% azide as a preservative.**SUGGESTED WORKING CONCENTRATION:** 0.5 - 1 µg/mL for Western blotting**mAb PURITY:** Near homogeneity as judged by SDS-PAGE. The antibody was produced *in vitro* using hybridomas grown in serum-free medium, and then purified by biochemical fractionation.**STORAGE CONDITIONS:** Store at 4°C. Do not freeze.**COUNTRY OF ORIGIN:** USA**BACKGROUND:**

Complex I, or NADH ubiquinone oxidoreductase, is a large protein complex of 950,000 Da molecular weight made up by 45 to 46 different subunits. A total of seven of the subunits of the complex are encoded by mitochondrial DNA, while the remainder subunits are nuclear encoded, which are translated in the cytosol and translocated into the organelle for assembly at the inner membrane.

The enzyme complex catalyses electron entry from NADH via a flavin (FMN) and several non-heme iron centers. Complex I is sensitive to a wide range of inhibitors, many of which are pesticides or other common environmental toxins, such as rotenone. Complex I dysfunction is a common cause of genetic OXPHOS defects. Altered functioning of this complex is also thought to contribute to several neurological disorders including Parkinson's disease and schizophrenia. Also, there is evidence of Complex I involvement in diabetes.

**Note: This product is for research purposes only. It is not to be used in humans or for diagnostic purposes.**

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