

TECHNICAL DATA SHEET**Catalog # MS501****ATP synthase Immunocapture Kit**

Rev.2

LOT #:**COMPONENTS:** 250 µg monoclonal antibody irreversibly crosslinked to protein G-agarose beads**APPLICATIONS:** Immunoprecipitation**CLONE ID OF MONOCLONAL ANTIBODY (mAb):** 12F4AD8AF8**SPECIES CROSS-REACTIVITY:** human, bovine, mouse, rat**HOST SPECIES AND ISOTYPE:** Mouse IgG2b, k**IMMUNOGEN:** Bovine Heart Complex V**CONCENTRATION:** 250 µg of capture antibody crosslinked to 62.5 µL matrix in 400 µL HEPES-Buffered Saline (HBS) with 0.02% azide as a preservative.**SUGGESTED WORKING CONCENTRATION:** 10 µL matrix capture approximately 20 µg complex V from 1 mg solubilized bovine heart mitochondria.**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 V, also called F_1F_0 ATPase or ATP synthase, is responsible for ATP production in oxidative phosphorylation and can work in reverse as a proton pumping ATPase. The enzyme was thought to be localized exclusively to mitochondria. However, it has recently been identified on the plasma membrane of several cell types including hepatocytes where it functions as the HDL receptor, on endothelial cells where it may act as the angiotensin receptor, and on the surface of cancer cells.

The enzyme in mammals is composed of 17 subunits, five of which make up the easily detached F_1 . The remainder subunits are components of two stalk domains and the proton pumping F_0 part of the machinery. Two of the subunits of the F_0 part are encoded on mitochondrial DNA while the other subunits are nuclear encoded. Mutations in the mitochondrial-encoded subunits of ATP synthase (Complex V) cause OXPHOS disease.

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

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