

TECHNICAL DATA SHEET**Catalog # MS506****ATP synthase subunit IF1 monoclonal antibody**

Rev.3

LOT #:

COMPONENTS:	100 µg monoclonal antibody
APPLICATIONS:	Western blotting, In-Cell ELISA
CLONE ID OF MONOCLONAL ANTIBODY (mAb):	5E2D7
SPECIES CROSS-REACTIVITY:	human, rat, mouse, bovine Bands at ~10 and ~18 kDa.
HOST SPECIES AND ISOTYPE:	Mouse IgG1, κ
IMMUNOGEN:	Recombinant IF ₁
CONCENTRATION:	1 mg/mL in HEPES-Buffered Saline (HBS) with 0.02% azide as a preservative.
SUGGESTED WORKING CONCENTRATION:	1 µg/mL for Western blotting 4 µg/mL for In-Cell ELISA (0.4 µg/well)
mAb PURITY:	Near homogeneity as judged by SDS-PAGE. The antibody was produced <i>in vitro</i> 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 F₁F₀ATPase 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 F₁. The remainder subunits are components of two stalk domains and the proton pumping F₀ part of the machinery. Two of the subunits of the F₀ 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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