

TECHNICAL DATA SHEET**ATP synthase Duplexing Activity + Quantity Duplexing Microplate Assay Kit****Catalog # MS543**

Rev.3

LOT #:

APPLICATIONS: Analysis of ATP synthase activity and quantity

SPECIES CROSS-
REACTIVITY: human, rat, bovine

KIT COMPONENTS:

Item	MS543
Buffer (Tube 1)	15 mL
Development Buffer (Tube 2)	20 mL
AP Development Reagent (Tube 3)	0.4 mL
Detergent	1 mL
Lipid Mix	6 mL
Detector Antibody (Tube A)	1 mL
AP Label (Tube B)	1 mL
Reagent Mix	20 mL
96-well pre-coated microplate (12 strips)	1

STORAGE CONDITIONS: Store at 4°C:
Buffer, Development Buffer, Detergent, Detector Antibody, AP Label and the pre-coated microplate

Store at -20°C:
Reagent Mix, AP Development Reagent and Lipid Mix

For multiple experiments it is recommended to aliquot the Reagent Mix and the contents of Tube 3 and to store them at -20°C or at -80°C for long-term storage.

COUNTRY OF ORIGIN: USA

BACKGROUND:

Complex V, also called F_1F_0 ATPase and 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 also on the plasma membrane of several cell types including hepatocytes where it is 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 mitochondria-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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