

ATP synthase Specific Activity Microplate Assay Kit

Cat. No. Kit-0117 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Rapid multiplexing microplate kit is used to determine both the activity and quantity of ATP synthase (Complex V) in a Human or Rat sample. The ratio of the two measurements represents the enzyme's specific activity. The ATP synthase enzyme is immunocaptured within the wells of the microplate and the enzyme activity is measured by monitoring the decrease in absorbance at 340 nm. Specifically, the conversion of ATP to ADP by ATP synthase is coupled to the oxidative reaction of NADH to NAD⁺. The formation of NAD⁺ results in a decrease in absorbance at 340 nm. Subsequently, in these same wells, the quantity of ATP synthase is determined by adding an ATP synthase specific antibody conjugated with alkaline phosphatase. This phosphatase changes the substrate pNPP from colorless to yellow (OD 405 nm) in a time dependent manner proportional to the amount of protein captured in the wells. Included for optimal performance of the assay are buffer, detergent, antibody, substrate, lipid mix and a 96-well microplate pre-coated with monoclonal antibody.

Size

1 x 96 well plate

Applications

Functional Studies

Target Species

Reacts with: Rat, Cow, Human Does not react with Mouse

Storage

Store Buffer, Detergent, Detector Antibody, 2500X AP Label, AP Buffer, and the microplate at 4°C. Store the Reagent Mix, AP Development Reagent and Lipid Mix at -20°C. For multiple experiments, the Reagent Mix and AP Development Reagent, and Lipid Mix may be aliquoted and stored at -80°C to minimize freeze

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Kit Components	Components Identifier 96 tests AP ATP synthase Detector antibody 1 x 1ml AP Buffer Tube 2 1 x 20ml AP Development Reagent 1 x 400μl AP label 2500 X Tube B 1 x 10μl ATP synthase precoated Microtiter plate 1 unit Buffer Tube 1 1 x 15ml Detergent 1 x 1ml Lipid Mix 1 x 6ml Reagent Mix 1 x 20ml
Detection method	Colorimetric
Compatible Sample Types	Cell culture supernatant, Cell culture extracts, Tissue, Tissue Extracts, Cell Lysate

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