

H⁺-transporting two-sector ATPase

Cat. No. EXWM-4650

Lot. No. (See product label)

Introduction

Description

A multisubunit non-phosphorylated ATPase that is involved in the transport of ions. Large enzymes of mitochondria, chloroplasts and bacteria with a membrane sector (Fo, Vo, Ao) and a cytoplasmic-compartment sector (F1, V1, A1). The F-type enzymes of the inner mitochondrial and thylakoid membranes act as ATP synthases. All of the enzymes included here operate in a rotational mode, where the extramembrane sector (containing 3 α - and 3 β -subunits) is connected via the Δ -subunit to the membrane sector by several smaller subunits. Within this complex, the γ - and ϵ -subunits, as well as the 9-12 c subunits rotate by consecutive 120° angles and perform parts of ATP synthesis. This movement is driven by the H⁺ electrochemical potential gradient. The V-type (in vacuoles and clathrin-coated vesicles) and A-type (archebacterial) enzymes have a similar structure but, under physiological conditions, they pump H⁺ rather than synthesize ATP.

Synonyms

ATP synthase; F1-ATPase; FoF1-ATPase; H⁺-transporting ATPase; mitochondrial ATPase; coupling factors (F0, F1 and CF1); chloroplast ATPase; bacterial Ca²⁺/Mg²⁺ ATPase

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 7.1.2.2 (Formerly EC 3.6.3.14)

Reaction

ATP + H₂O + H⁺_{in} = ADP + phosphate + H⁺_{out}

Notes

This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage

Store it at +4 °C for short term. For long term storage, store it at -20 °C~-80 °C.