



# Recombinant Rat ATP synthase subunit alpha, mitochondrial (Atp5a1)

<b>Product Code</b>	CSB-YP002344RA
<b>Storage</b>	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
<b>Uniprot No.</b>	P15999
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Rattus norvegicus (Rat)
<b>Purity</b>	>85% (SDS-PAGE)
<b>Sequence</b>	<p>QKTGTAE MSSILEERIL GADTSVDLEE TGRVLSIGDG IARVHGLRNV            QAEEMVEFSS GLKGMSLNLE PDNVGVVVFVFG NDKLIKEGDI VKRTGAIVDV            PVGDELLGRV VDALGNAIDG KGPVVGSKIRR RVGLKAPGII PRISVREPMQ            TGIIKAVDSLIV PIGRGQRELI IGDRQTGKTS IAIDTIINQK RFNDGTDEKK            KLYCIYVAIG QKRSTVAQLV KRLTDADAMK YTIVVSATAS DAAPLQYLAP            YSGCSMGEYF RDNGKHALII YDDLKQAVA YRQMSLLLR PPGREAYPGD            VFYLHSRLLE RAAKMNDSFG GGSALTALPVI ETQAGDVSAY IPTNVISITD            GQIFLETETF YKIRPAINV GLSVSRVGS AQTAMKQVA GTMKLELAQY            REVAFAAQFG SDLDAATQQL LSRGVRLTEL LKQGQYSPMA IEEQVAVIYA            GVRGYLDKLE PSKITKFESA FLSHVVSQHQ SLLGNIRSDG KISEQSDAKL            KEIVTNFLAG FEP</p>
<b>Source</b>	Yeast
<b>Target Names</b>	Atp5a1
<b>Protein Names</b>	Recommended name: ATP synthase subunit alpha, mitochondrial
<b>Expression Region</b>	44-553
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	Tag type will be determined during the manufacturing process.
<b>Protein Length</b>	Full Length of Mature Protein
<b>Target Details</b>	<p>This gene encodes a subunit of mitochondrial ATP synthase. Mitochondrial ATP synthase catalyzes ATP synthesis, using an electrochemical gradient of protons across the inner membrane during oxidative phosphorylation. ATP synthase is composed of two linked multi-subunit complexes: the soluble catalytic core, F1, and the membrane-spanning component, Fo, comprising the proton channel. The catalytic portion of mitochondrial ATP synthase consists of 5 different subunits (alpha, beta, gamma, delta, and epsilon) assembled with a stoichiometry of 3 alpha, 3 beta, and a single representative of the other 3. The proton channel consists of three main subunits (a, b, c). This gene encodes the alpha subunit of the catalytic core. Alternatively spliced transcript variants encoding the same protein have been identified. Pseudogenes of this gene are located on chromosomes 9, 2, and 16.</p>



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**Reconstitution**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

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**Shelf Life**

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.