

**ATP5A1 / ATP Synthase Alpha Antibody (aa201-250)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS14223****Specification**

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**ATP5A1 / ATP Synthase Alpha Antibody (aa201-250) - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | WB, IHC                |
| Primary Accession | <a href="#">P25705</a> |
| Reactivity        | Human, Mouse, Rat      |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Calculated MW     | 60kDa KDa              |

**ATP5A1 / ATP Synthase Alpha Antibody (aa201-250) - Additional Information****Gene ID** 498**Other Names**

ATP synthase subunit alpha, mitochondrial, ATP5A1, ATP5A, ATP5AL2, ATPM

**Target/Specificity**

ATP5A1 Antibody detects endogenous levels of total ATP5A1 protein.

**Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

**Precautions**

ATP5A1 / ATP Synthase Alpha Antibody (aa201-250) is for research use only and not for use in diagnostic or therapeutic procedures.

**ATP5A1 / ATP Synthase Alpha Antibody (aa201-250) - Protein Information****Name** ATP5F1A ([HGNC:823](#))**Function**

Mitochondrial membrane ATP synthase (F(1)F(0) ATP synthase or Complex V) produces ATP from ADP in the presence of a proton gradient across the membrane which is generated by electron transport complexes of the respiratory chain. F-type ATPases consist of two structural domains, F(1) - containing the extramembraneous catalytic core, and F(0) - containing the membrane proton channel, linked together by a central stalk and a peripheral stalk. During catalysis, ATP synthesis in the catalytic domain of F(1) is coupled via a rotary mechanism of the central stalk subunits to proton translocation. Subunits alpha and beta form the catalytic core in F(1). Rotation of the central stalk against the surrounding alpha(3)beta(3) subunits leads to hydrolysis of ATP in three separate catalytic sites on the beta subunits. Subunit alpha does not bear the catalytic high-affinity ATP-binding sites (By similarity). Binds the bacterial siderophore enterobactin and can promote mitochondrial accumulation of enterobactin-derived iron ions (PubMed:<a href="http://www.uniprot.org/citations/30146159" target="\_blank">30146159</a>).

**Cellular Location**

Mitochondrion. Mitochondrion inner membrane {ECO:0000250|UniProtKB:P19483}; Peripheral membrane protein {ECO:0000250|UniProtKB:P19483}; Matrix side {ECO:0000250|UniProtKB:P19483}. Cell membrane; Peripheral membrane protein; Extracellular side. Note=Colocalizes with HRG on the cell surface of T-cells (PubMed:19285951).

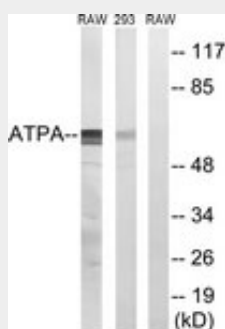
**Tissue Location**

Fetal lung, heart, liver, gut and kidney. Expressed at higher levels in the fetal brain, retina and spinal cord

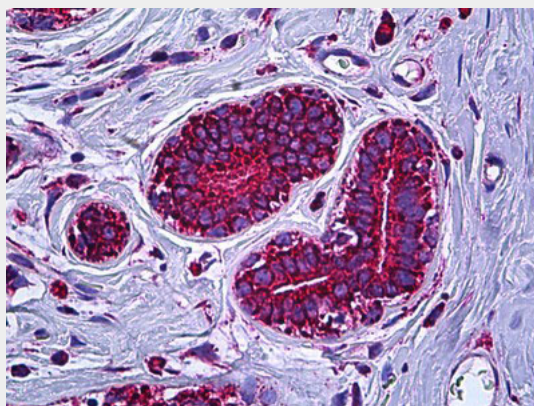
**ATP5A1 / ATP Synthase Alpha Antibody (aa201-250) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

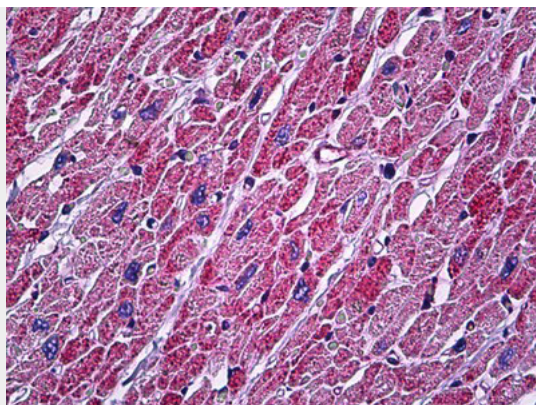
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**ATP5A1 / ATP Synthase Alpha Antibody (aa201-250) - Images**

Western blot of extracts from 293/RAW264.7 cells, using ATP5A1 Antibody.



Anti-ATP5A1 antibody IHC of human breast.



Anti-ATP5A1 antibody IHC of human heart.

### **ATP5A1 / ATP Synthase Alpha Antibody (aa201-250) - Background**

Mitochondrial membrane ATP synthase (F(1)F(0) ATP synthase or Complex V) produces ATP from ADP in the presence of a proton gradient across the membrane which is generated by electron transport complexes of the respiratory chain. F-type ATPases consist of two structural domains, F(1) - containing the extramembraneous catalytic core, and F(0) - containing the membrane proton channel, linked together by a central stalk and a peripheral stalk. During catalysis, ATP synthesis in the catalytic domain of F(1) is coupled via a rotary mechanism of the central stalk subunits to proton translocation. Subunits alpha and beta form the catalytic core in F(1). Rotation of the central stalk against the surrounding alpha(3)beta(3) subunits leads to hydrolysis of ATP in three separate catalytic sites on the beta subunits. Subunit alpha does not bear the catalytic high-affinity ATP-binding sites (By similarity).

### **ATP5A1 / ATP Synthase Alpha Antibody (aa201-250) - References**

Kataoka H., et al. Biochim. Biophys. Acta 1089:393-395(1991).  
Godbout R., et al. Gene 123:195-201(1993).  
Akiyama S., et al. Biochim. Biophys. Acta 1219:129-140(1994).  
Kalnina N., et al. Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.  
Ota T., et al. Nat. Genet. 36:40-45(2004).