

Atase (H-300): sc-292403

BACKGROUND

Atase (amidophosphoribosyltransferase), also known as PPAT (phosphoribosyl pyrophosphate (PRPP) amidotransferase), PRAT or GPAT (glutamine phosphoribosyl pyrophosphate amidotransferase), is a ubiquitously expressed N-terminal nucleophile-type glutamine amidotransferase that belongs to the purine/pyrimidine phosphoribosyltransferase family. Existing as a homotetramer, Atase plays an important role in purine metabolism. More specifically, Atase functions as regulatory enzyme and contains one glutamine amidotransferase type-2 domain. Binding a magnesium ion and a 4Fe-4S cluster as cofactors, Atase catalyzes the first step (the rate-limiting step) in the purine nucleotide biosynthesis pathway, a two-step reaction that results in the formation of phosphoribosylamine from PRPP and glutamine. The first step of this reaction is catalyzed by the N-terminal glutaminase domain while the second step is catalyzed by the C-terminal PRTase domain.

REFERENCES

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- Koenigsnecht, M.J., et al. 2007. Glutamine phosphoribosylpyrophosphate amidotransferase-independent phosphoribosyl amine synthesis from ribose 5-phosphate and glutamine or asparagine. *J. Biol. Chem.* 282: 28379-28384.

CHROMOSOMAL LOCATION

Genetic locus: PPAT (human) mapping to 4q12; Ppat (mouse) mapping to 5 C3.3.

SOURCE

Atase (H-300) is a rabbit polyclonal antibody raised against amino acids 218-517 mapping at the C-terminus of Atase of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Atase (H-300) is recommended for detection of Atase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Atase (H-300) is also recommended for detection of Atase in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Atase siRNA (h): sc-88891, Atase shRNA Plasmid (h): sc-88891-SH and Atase shRNA (h) Lentiviral Particles: sc-88891-V.

Molecular Weight of Atase proenzyme: 60 kDa.

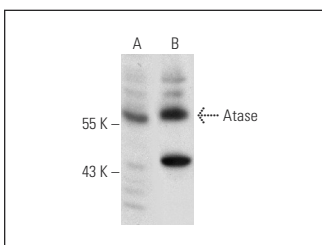
Molecular Weight of Atase mature enzyme: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Atase (H-300): sc-292403. Western blot analysis of Atase expression in Hep G2 (A) and K-562 (B) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.