

ATIC Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52753

Product Information

Application	WB
Primary Accession	P31939
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	64616

Additional Information

Gene ID	471
Other Names	5 aminoimidazole 4 carboxamide 1 beta D ribonucleotide transformylase/inosinicase;5 aminoimidazole 4 carboxamide ribonucleotide formyltransferase;5 aminoimidazole 4 carboxamide ribonucleotide formyltransferase/IMP cyclohydrolase;5-aminoimidazole-4-carboxamide ribonucleotide formyltransferase;AICAR;AICAR formyltransferase/IMP cyclohydrolase bifunctional enzyme;AICAR transformylase;AICARFT;AICARFT/IMPCHASE;ATIC; Bifunctional purine biosynthesis protein PURH;FLJ93545;IMP cyclohydrolase;IMP synthase;IMP synthetase;IMPCHASE;Inosinicase;OK/SW-cl.86; Phosphoribosylaminoimidazolecarboxamide formyltransferase; Phosphoribosylaminoimidazolecarboxamide formyltransferase/IMP cyclohydrolase;PUR9_HUMAN; PURH.
Dilution	WB~~1:1000
Format	Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.09% (W/V) sodium azide, 50%,glycerol
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	ATIC (HGNC:794)
Function	Bifunctional enzyme that catalyzes the last two steps of purine biosynthesis (PubMed: 11948179 , PubMed: 14756554). Acts as a transformylase that incorporates a formyl group to the AMP analog AICAR (5-amino-1-(5-phospho-beta-D-ribose)imidazole-4-carboxamide) to produce the intermediate formyl-AICAR (FAICAR) (PubMed: 10985775 , PubMed: 11948179 , PubMed: 9378707). Can use both 10-formyldihydrofolate

and 10-formyltetrahydrofolate as the formyl donor in this reaction (PubMed:[10985775](#)). Also catalyzes the cyclization of FAICAR to inosine monophosphate (IMP) (PubMed:[11948179](#), PubMed:[14756554](#)). Is able to convert thio-AICAR to 6-mercaptopurine ribonucleotide, an inhibitor of purine biosynthesis used in the treatment of human leukemias (PubMed:[10985775](#)). Promotes insulin receptor/INSR autophosphorylation and is involved in INSR internalization (PubMed:[25687571](#)).

Cellular Location

Cytoplasm, cytosol {ECO:0000250|UniProtKB:P54113}

Tissue Location

Present in the heart, brain, placenta, lung, liver, skeletal muscle, kidney, pancreas.

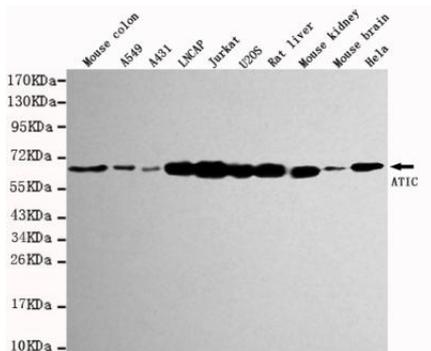
Background

Bifunctional enzyme that catalyzes 2 steps in purine biosynthesis.

References

- Rayl E.A.,et al.J. Biol. Chem. 271:2225-2233(1996).
Yamauchi M.,et al.DNA Res. 2:269-275(1995).
Sugita T.,et al.J. Biochem. 122:309-313(1997).
Shichijo S.,et al.Submitted (MAY-2001) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images



Western blot detection of ATIC in various tissues and cell lysates using ATIC mouse mAb (1:1000 diluted). Predicted band size:64kDa.Observed band size:64kDa.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.