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KD-Validated Anti-ATIC Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI1985

Product Information

Application	WB, FC
Primary Accession	P31939
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Names	24GB6980
Calculated MW	64616
Gene Name	ATIC
Aliases	ATIC; 5-Aminoimidazole-4-Carboxamide Ribonucleotide Formyltransferase/IMP Cyclohydrolase; PURH; IMPCHASE; AICARFT; Phosphoribosylaminoimidazolecarboxamide Formyltransferase/IMP Cyclohydrolase; AICAR Transformylase/Inosine Monophosphate Cyclohydrolase; Bifunctional Purine Biosynthesis Protein ATIC; 5-Aminoimidazole-4-Carboxamide-1-Beta-D-Ribonucleotide Transformylase/Inosinicase; AICAR Formyltransferase/IMP Cyclohydrolase Bifunctional Enzyme; Epididymis Secretory Sperm Binding Protein Li 70p; Bifunctional Purine Biosynthesis Protein PURH; AICARFT/IMPCHASE; HEL-S-70p; AICAR
Immunogen	Recombinant protein of human ATIC

Additional Information

Gene ID	471
Other Names	Bifunctional purine biosynthesis protein ATIC, AICAR transformylase/inosine monophosphate cyclohydrolase, ATIC, Phosphoribosylaminoimidazolecarboxamide formyltransferase, 2.1.2.3, 5-aminoimidazole-4-carboxamide ribonucleotide formyltransferase, AICAR formyltransferase, AICAR transformylase, Inosine 5'-monophosphate cyclohydrolase, IMP cyclohydrolase, 3.5.4.10, IMP synthase, Inosinicase, Bifunctional purine biosynthesis protein ATIC, N-terminally processed, ATIC (HGNC:794)

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-ribosyl)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.

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