10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

IMPDH2 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7390a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P12268
Other Accession	E9PU28, P24547, P12269
Reactivity	Human, Mouse
Predicted	Hamster, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19382
Calculated MW	55805
Antigen Region	108-137

Additional Information

Gene ID	3615
Other Names	Inosine-5'-monophosphate dehydrogenase 2 {ECO:0000255|HAMAP-Rule:MF_03156}, IMP dehydrogenase 2 {ECO:0000255|HAMAP-Rule:MF_03156}, IMPD 2 {ECO:0000255|HAMAP-Rule:MF_03156}, IMPDH 2 {ECO:0000255|HAMAP-Rule:MF_03156}, 111205 {ECO:0000255|HAMAP-Rule:MF_03156}, IMPDH-II, IMPDH2 {ECO:0000255|HAMAP-Rule:MF_03156}, IMPD2
Target/Specificity	This IMPDH2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 108-137 amino acids from the N-terminal region of human IMPDH2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	IMPDH2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IMPDH2 (HGNC:6053)
Synonyms	IMPD2
Function	Catalyzes the conversion of inosine 5'-phosphate (IMP) to xanthosine 5'-phosphate (XMP), the first committed and rate-limiting step in the de novo synthesis of guanine nucleotides, and therefore plays an important role in the regulation of cell growth (PubMed:7763314, PubMed:7903306). Could also have a single-stranded nucleic acid-binding activity and could play a role in RNA and/or DNA metabolism (PubMed:14766016). It may also have a role in the development of malignancy and the growth progression of some tumors.
Cellular Location	Cytoplasm. Nucleus. Cytoplasm, cytosol. Note=Can form fiber-like subcellular structures termed 'cytoophidia' in response to intracellular guanine-nucleotide depletion.
Tissue Location	IMPDH1 is the main species in normal leukocytes and IMPDH2 predominates over IMPDH1 in the tumor

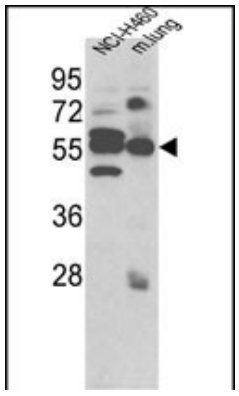
Background

IMPDH2 is the rate-limiting enzyme in the de novo guanine nucleotide biosynthesis. It is thus involved in maintaining cellular guanine deoxy- and ribonucleotide pools needed for DNA and RNA synthesis. The protein catalyzes the NAD-dependent oxidation of inosine-5'-monophosphate into xanthine-5'-monophosphate, which is then converted into guanosine-5'-monophosphate. Its gene is up-regulated in some neoplasms, suggesting it may play a role in malignant transformation.

References

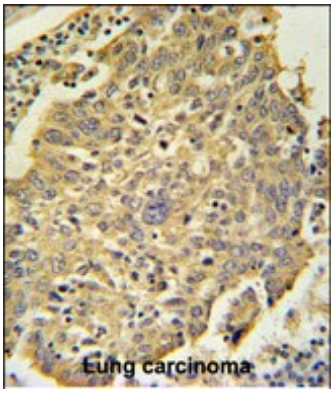
Sombogaard,F., Pharmacogenet. Genomics 19 (8), 626-634 (2009)
Mohamed,M.F., Genet. Test. 12 (4), 513-516 (2008)

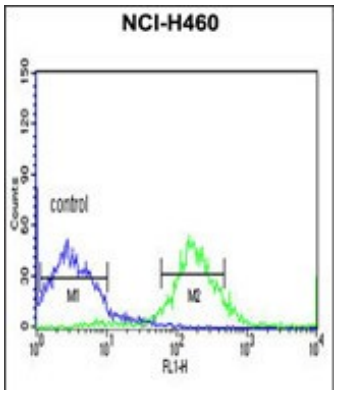
Images



Western blot analysis of IMPDH2 Antibody (N-term) (Cat.# AP7390a) in NCI-H460 cell line and mouse lung tissue lysates (35ug/lane). IMPDH2 (arrow) was detected using the purified Pab.

IMPDH2 Antibody (N-term) (Cat.# AP7390a) IHC analysis in formalin fixed and paraffin embedded human Lung carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the IMPDH2 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.





IMPDH2 Antibody (N-term) (Cat. #AP7390a) flow cytometric analysis of NCI-H460 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- The nuclear DEK interactome supports multi-functionality: