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# IMPDH1 Rabbit pAb

Catalog # AP99041

## Product Information

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| **Application** | WB, IHC-P, IHC-F, IF |
| **Primary Accession** | P20839 |
| **Other Accession** | P20839 |
| **Reactivity** | Rat, Human, Mouse |
| **Predicted** | Pig, Rabbit, Dog |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 55406 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human IMPDH1 |
| **Epitope Specificity** | 201-300/514 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SIMILARITY** | Belongs to the IMPDH/GMPR family.Contains 2 CBS domains. |
| **SUBUNIT** | Homotetramer. |
| **DISEASE** | Retinitis pigmentosa 10 (RP10) [MIM:180105]: A retinal dystrophy belonging to the group of pigmentary retinopathies. Retinitis pigmentosa is characterized by retinal pigment deposits visible on fundus examination and primary loss of rod photoreceptor cells followed by secondary loss of cone photoreceptors. Patients typically have night vision blindness and loss of midperipheral visual field. As their condition progresses, they lose their far peripheral visual field and eventually central vision as well. Note=The disease is caused by mutations affecting the gene represented in this entry. Leber congenital amaurosis 11 (LCA11) [MIM:613837]: A severe dystrophy of the retina, typically becoming evident in the first years of life. Visual function is usually poor and often accompanied by nystagmus, sluggish or near-absent papillary responses, photophobia, high hyperopia and keratoconus. Note=The disease is caused by mutations affecting the gene represented in this entry. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | The protein encoded by this gene acts as a homotetramer to regulate cell growth. The encoded protein is an enzyme that catalyzes the synthesis of xanthine monophosphate (XMP) from inosine-5'-monophosphate (IMP). This is the rate-limiting step in the de novo synthesis of guanine nucleotides. Defects in this gene are a cause of retinitis pigmentosa type 10 (RP10). Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Dec 2008]. |

## Additional Information

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| **Gene ID** | 3614 |

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| **Other Names** | IMPD; IMPD1; IMPDH-I; LCA11; RP10; sWSS2608; B930086D20Rik; IMPD 1; IMPDH 1; IMDH1_HUMAN; IMPDH1; IMP dehydrogenase 1; 1.1.1.205; IMDH1_MOUSE; IMDH1_RAT; inosine monophosphate dehydrogenase 1; retinitis pigmentosa 10 (autosomal dominant); IMP (inosine 5'-monophosphate) dehydrogenase 1 |
| **Dilution** | WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1ug /Test |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | IMPDH1 {ECO:0000255\|HAMAP-Rule:MF_03156} |
| **Synonyms** | IMPD1 |
| **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. Could also have a single-stranded nucleic acid-binding activity and could play a role in RNA and/or DNA metabolism. It may also have a role in the development of malignancy and the growth progression of some tumors. |
| **Cellular Location** | Cytoplasm {ECO:0000255\|HAMAP-Rule:MF_03156, ECO:0000269\|PubMed:14766016}. Nucleus {ECO:0000255\|HAMAP-Rule:MF_03156, ECO:0000269\|PubMed:14766016} |
| **Tissue Location** | IMP type I is the main species in normal leukocytes and type II predominates over type I in the tumor |

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