# Active Recombinant Mouse Inositol Monophosphatase Domain Containing 1, His-tagged

**Cat. No.** Impad1-1975M **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | RecombinantMouse Impad1 protein was expressed in Chinese HamsterOvary cell line. Glu51-His356, with an N-terminal CD33signals sequence and 6-His tag. |
| **Species** | Mouse |
| **Source** | CHO |
| **ProteinLength** | 51-356 a.a. |
| **Description** | Sulfurmetabolism is critical for multicellular organism development. Sulfur isactivated invivoto form the sulfur donor, 3"-phosphoadenosine 5"-phosphosulfate (PAPS), andthen transferred to acceptor molecules, such as glycosaminoglycans, steroidsand xenobiotics. Following transfer, PAPS is converted to 3"phosphoadenosine 5"phosphate (PAP). PAP causes inhibition of many sulfotransferases and istherefore cytotoxic. Impad1 is a recentlydiscovered PAP specific phosphatase that removes the 3"phosphate from PAP toform nontoxic AMP, which can subsequently be recycled by cells. The enzyme islocalized in the Golgi apparatus where glycosaminogly can synthesis occurs.Mouse Impad1 exhibits91% sequence identity with the human homologue. |
| **Form** | Supplied as a 0.2 μmfiltered solution in Tris, NaCl and Glycerol. |
| **N-terminalSequence** | Inconclusive result.Intact N-terminus verified by anti-poly-His Western. |

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| **MolecularWeight** | 34 kDa |
| **Activity** | Measuredby its ability to dephosphorylate 3''-Phosphoadenosine 5''-phosphate. Thespecific activity is > 1,600 pmol/min/ug, as measured under the described conditions. |
| **Endotoxin Level** | <1.0EU per 1μg of the protein by the LAL method. |
| **SDS-PAGE** | 35-40kDa, reducing conditions. |
| **Purity** | >95%,by SDS-PAGE under reducing conditions and visualized by Colloidal CoomassieBlue stain at 5 μg per lane. |
| **Storage** | Use a manual defrost freezer and avoid repeated freezethawcycles. 6months from date of receipt, -20 to -70°C as supplied. 3 months, -20 to -70°Cunder sterile conditions after opening. |

## GENE INFORMATION

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| **Gene Name** | Impad1 inositolmonophosphatase domain containing 1 [ Mus musculus ] |
| **Official Symbol** | Impad1 |
| **Synonyms** | Impad1;inositol monophosphatase domain containing 1; Jaws; gPAPP;AA408880; AI451589; AL022796; B230207P20; 1110001C20Rik; inositolmonophosphatase 3; IMP 3; IMPase 3; golgi-resident PAP phosphatase;myo-inositol monophosphatase A3; inositol-1(or 4)-monophosphatase 3; inositolmonophosphatase domain-containing protein 1; Golgi 3-prime phosphoadenosine5-prime phosphate 3-prime phosphatase; EC 3.1.3.25 |
| **Gene ID** | 242291 |

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| **mRNA Refseq** | NM_177730 |
| **Protein Refseq** | NP_808398 |
| **UniProt ID** | Q80V26 |
| **Chromosome Location** | 4 |
| **Pathway** | Inositol phosphatemetabolism; rrMetabolic pathways; Phosphatidylinositol signaling system;Sulfur metabolism; myo-inositol biosynthesis |
| **Function** | 3" (2"), 5"-bisphosphatenucleotidase activity; 3"-nucleotidase activity; hydrolase activity; inositolmonophosphate 1-phosphatase activity; inositol monophosphate 3-phosphataseactivity; inositol monophosphate 4-phosphatase activity; inositolmonophosphate phosphatase activity; metal ion binding |

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