

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse/Rat                                                                                                                                                                                                                                                                   |
| <b>Specificity</b>        | Detects recombinant mouse Inositol Monophosphatase 3/IMPAD1 in direct ELISAs and Western blots. Detects mouse Inositol Monophosphatase 3/IMPAD1 and rat Inositol Monophosphatase 3/IMPAD1 in Western blots.                                                                 |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Chinese hamster ovary cell line CHO-derived recombinant mouse Inositol Monophosphatase 3/IMPAD1<br>Asn145-His356<br>Accession # Q80V26                                                                                                                                      |
| <b>Conjugate</b>          | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

IMPAD1 (Inositol monophosphatase domain-containing protein 1; also IMPA3, gPAPP and IMPase 3) is a 40-42 kDa member of the inositol monophosphatase family of proteins. It is expressed in embryo, and found in Purkinje cells, brain stem, lung and chondrocytes. IMPAD1 in theory may catalyze the synthesis of myo-inositol from myo-inositol monophosphate. Free myo-inositol is used to generate inositol phospholipid, an essential component of intracellular signaling pathways that mobilize calcium. IMPAD1 is reported to promote sulfation of chondroitin by converting PAP (an endproduct of the sulfation process) to 5'-AMP. PAP is a known inhibitor of SULTs. IMPAD1 is a 356 amino acid (aa) type II transmembrane Golgi-embedded glycoprotein. It contains a short cytoplasmic tail (aa 1-12) and an extended luminal region (aa 34-356) that contains its catalytic domain (aa 60-347). Over aa 145-356, mouse IMPAD1 shares 99% and 93% aa sequence identity with rat and human IMPAD1, respectively.

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