

DESCRIPTION

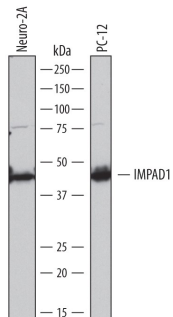
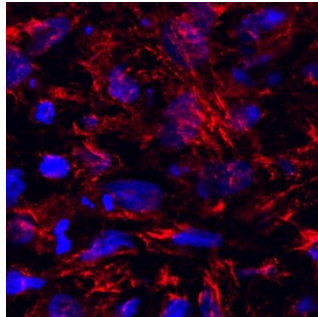
Species Reactivity	Mouse/Rat
Specificity	Detects recombinant mouse Inositol Monophosphatase 3/IMPAD1 in direct ELISAs and Western blots. Detects mouse Inositol Monophosphatase 3/IMPAD1 and rat Inositol Monophosphatase 3/IMPAD1 in Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse Inositol Monophosphatase 3/IMPAD1 Asn145-His356 Accession # Q80V26
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Mouse and Rat Inositol Monophosphatase 3/IMPAD1 by Western Blot. Western blot shows lysates of Neuro-2A mouse neuroblastoma cell line and PC-12 rat adrenal pheochromocytoma cell line. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Mouse Inositol Monophosphatase 3/IMPAD1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7028) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Inositol Monophosphatase 3/IMPAD1 at approximately 42 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunocytochemistry</p>  <p>Inositol Monophosphatase 3/IMPAD1 in Mouse Mesenchymal Stem Cells. Inositol Monophosphatase 3/IMPAD1 was detected in immersion fixed mouse mesenchymal stem cells differentiated into chondrocytes using Sheep Anti-Mouse/Rat Inositol Monophosphatase 3/IMPAD1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7028) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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.