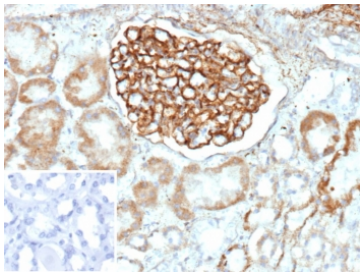
PLA2R1 Antibody / Phospholipase A2 receptor 1 [clone PLA2R1/4893] (V5697)

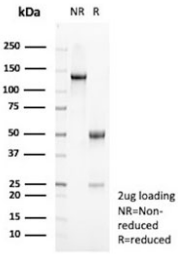
Catalog No.	Formulation	Size
V5697-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5697-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5697SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2, kappa
Clone Name	PLA2R1/4893
Purity	Protein A affinity
UniProt	Q13018
Localization	Cell membrane, Secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This PLA2R1/Phospholipase A2 receptor 1 antibody is available for research use only.



Immunohistochemistry analysis of PLA2R1/Phospholipase A2 receptor 1 antibody in human kidney tissue. Formalin-fixed, paraffin-embedded human kidney shows strong membranous HRP-DAB brown staining within glomerular podocytes, outlining the capillary loops, while surrounding tubular epithelial cells demonstrate comparatively weaker staining. The inset image represents the negative control in which PBS was used in place of the primary antibody, showing no specific brown chromogenic signal. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to immunostaining.



SDS-PAGE analysis of purified, BSA-free PLA2R1/Phospholipase A2 receptor 1 antibody (clone PLA2R1/4893) as confirmation of integrity and purity.

Description

PLA2R1 antibody, also known as Phospholipase A2 receptor 1 antibody, recognizes a type I transmembrane glycoprotein encoded by the PLA2R1 gene. This receptor, commonly referred to as the M-type phospholipase A2 receptor or PLA2 receptor, is primarily localized to the plasma membrane and is highly expressed in podocytes of the renal glomerulus. PLA2R1 belongs to the mannose receptor family and contains multiple C-type lectin-like domains, a fibronectin type II domain, and a cysteine-rich region that contribute to ligand binding and receptor internalization. A PLA2R1 antibody enables investigation of receptor distribution in kidney tissue and other organs where regulated phospholipase signaling is biologically relevant.

Phospholipase A2 receptor 1 functions in binding and internalizing secreted phospholipase A2 enzymes, thereby modulating inflammatory lipid mediator production and extracellular phospholipase activity. Through this interaction, PLA2R1 participates in pathways influencing cellular proliferation, senescence, and immune regulation. In the kidney, PLA2R1 expression on podocytes has particular clinical significance because autoantibodies against PLA2R1 are strongly associated with primary membranous nephropathy. As a result, detection of PLA2R1 protein expression is widely studied in renal pathology research.

The extracellular domain of PLA2R1 is heavily glycosylated, contributing to apparent molecular weight variation on SDS-PAGE. The intracellular tail contains motifs involved in endocytosis and intracellular signaling cascades. Beyond renal tissue, PLA2R1 expression has been reported in lung, placenta, and selected epithelial tissues, where it may participate in inflammatory responses and tissue remodeling. Altered expression patterns have been investigated in cancer biology, with evidence suggesting roles in tumor suppression and cellular senescence pathways.

Because of its defined structure and disease relevance, PLA2R1 antibody is useful for studying receptor localization, podocyte biology, and immune-mediated renal disorders. A monoclonal antibody directed against PLA2R1 provides targeted recognition of the receptor for research applications requiring consistent performance across experimental batches.

Application Notes

Optimal dilution of the PLA2R1/Phospholipase A2 receptor 1 antibody should be determined by the researcher.

Immunogen

A portion of amino acids 300-600 from human PLA2R1 protein was used as the immunogen for the PLA2R1/Phospholipase A2 receptor 1 antibody.

Storage

Aliquot the PLA2R1/Phospholipase A2 receptor 1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.