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Recombinant Anti-PLSCR1 Rabbit mAb

Catalog # AP95184

Product Information

Application	WB, FC, IP, IF/IC
Primary Accession	O15162
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal
Calculated MW	35049

Additional Information

Gene ID	5359
Other Names	Phospholipid scramblase 1; PL scramblase 1; Ca(2+)-dependent phospholipid scramblase 1; Erythrocyte phospholipid scramblase; MmTRA1b
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within human PLSCR1 protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) FC~~1:10~50 IP~~N/A IF/IC~~N/A
Format	Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	PLSCR1
Function	Catalyzes calcium-induced ATP-independent rapid bidirectional and non-specific movement of phospholipids (lipid scrambling or lipid flip-flop) between the inner and outer leaflet of the plasma membrane resulting in collapse of the phospholipid asymmetry which leads to phosphatidylserine externalization on the cell surface (PubMed:10770950, PubMed:18629440, PubMed:23590222, PubMed:23659204, PubMed:24343571, PubMed:24648509, PubMed:29748552, PubMed:32110987, PubMed:8663431, PubMed:9218461, PubMed:9485382, PubMed:9572851). Mediates calcium-dependent phosphatidylserine externalization and apoptosis in neurons via its association with TRPC5 (By similarity). Also exhibits magnesium-dependent nuclease activity against double- stranded DNA and RNA but not single-stranded DNA and can enhance DNA decatenation mediated by TOP2A (PubMed:17567603, PubMed:27206388). Negatively regulates FcR-mediated phagocytosis in differentiated macrophages (PubMed:26745724). May contribute to cytokine-regulated cell proliferation and differentiation (By similarity). May play a role in the antiviral response of

interferon (IFN) by amplifying and enhancing the IFN response through increased expression of select subset of potent antiviral genes (PubMed:15308695). Inhibits the functions of viral transactivators, including human T-cell leukemia virus (HTLV)-1 protein Tax, human immunodeficiency virus (HIV)-1 Tat, human hepatitis B virus (HBV) HBx, Epstein-Barr virus (EBV) BZLF1 and human cytomegalovirus IE1 and IE2 proteins through direct interactions (PubMed:22789739, PubMed:23501106, PubMed:25365352, PubMed:31434743, PubMed:35138119). Also mediates the inhibition of influenza virus infection by preventing nuclear import of the viral nucleoprotein/NP (PubMed:29352288, PubMed:35595813). Plays a crucial role as a defense factor against SARS-CoV-2 independently of its scramblase activity by directly targeting nascent viral vesicles to prevent virus-membrane fusion and the release of viral RNA into the host-cell cytosol (PubMed:37438530).

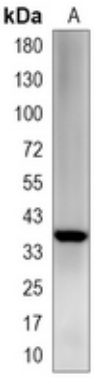
Cellular Location

Cell membrane; Single-pass type II membrane protein. Cell membrane; Lipid-anchor; Cytoplasmic side. Nucleus. Cytoplasm. Cytoplasm, perinuclear region Note=Localizes to the perinuclear region in the presence of RELT (PubMed:22052202). Palmitoylation regulates its localization to the cell membrane or the nucleus; trafficking to the cell membrane is dependent upon palmitoylation whereas in the absence of palmitoylation, localizes to the nucleus (PubMed:12564925)

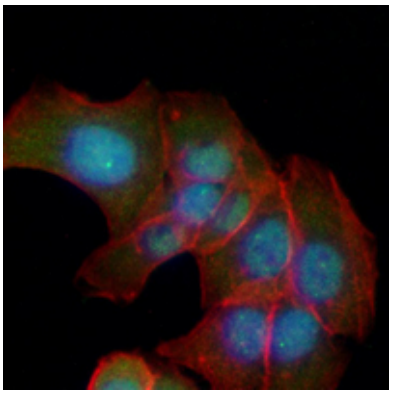
Tissue Location

Expressed in platelets, erythrocyte membranes, lymphocytes, spleen, thymus, prostate, testis, uterus, intestine, colon, heart, placenta, lung, liver, kidney and pancreas. Not detected in brain and skeletal muscle.

Images



Western blot analysis of PLSCR1 expression in A431 (A) whole cell lysates. (Predicted band size: 35 kD; Observed band size: 35 kD)



Immunofluorescent analysis of PLSCR1 staining in A431 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).