

KD-Validated Anti-Phospholipid Scramblase 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody

Catalog # AGI1691

Product Information

Application	WB, FC
Primary Accession	O15162
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	24GB1550
Calculated MW	35049
Gene Name	PLSCR1
Aliases	Phospholipid Scramblase 1; MMTRA1B; Ca(2+)-Dependent Phospholipid Scramblase 1; Erythrocyte Phospholipid Scramblase; Mg(2+)-Dependent Nuclease; PL Scramblase 1; EC 3.1.-.-; MmTRA1b
Immunogen	A synthesized peptide derived from human Scramblase 1

Additional Information

Gene ID	5359
Other Names	Phospholipid scramblase 1, PL scramblase 1, Ca(2+)-dependent phospholipid scramblase 1, Erythrocyte phospholipid scramblase, Mg(2+)-dependent nuclease, 3.1.-.-, MmTRA1b, PLSCR1

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.

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