

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse PEAR1 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant human PEAR1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse PEAR1 Leu19-Leu754 Accession # Q8VIK5
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
Flow Cytometry	2.5 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Western Blot

Detection of Mouse PEAR1 by Western Blot. Western blot shows lysates of mouse spleen tissue and mouse platelets. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Mouse PEAR1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7607) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for PEAR1 at approximately 120-150 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Flow Cytometry

Detection of PEAR1 in bEnd.3 Mouse Cell Line by Flow Cytometry. bEnd.3 mouse endothelioma cell line was stained with Sheep Anti-Mouse PEAR1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7607, filled histogram) or isotype control antibody (Catalog # 5-001-A, open histogram), followed by Phycoerythrin-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # F0126).

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

PEAR1 (Platelet Endothelial Aggregation Receptor 1; Also Jedi/Jagged and Delta protein and MEGF12) is a 140-160 kDa member of the MEGF/Multiple Epidermal Growth Factor domain family of molecules. It has restricted expression, being found on megakaryocytes/platelets, vascular endothelial cells, early hematopoietic stem cells and dorsal root ganglia satellite glial cells. PEAR1 has an extracellular domain (ECD) similar to Jagged1, and soluble PEAR1 is known to be an inhibitor of notch signaling. Thus, it likely participates in blood cell differentiation. It also is reported to bind to apoptotic neurons, facilitating clearance during development. Mature mouse PEAR1 is a 1016 amino acid (aa) type I transmembrane protein. It possesses a 736 aa ECD (aa 19-754) plus a 259 aa cytoplasmic region (aa 776-1034). The ECD contains one EMI (Emilin) domain (aa 25-137), followed by 9 EGF-like repeats (aa 181-691). There are at least three utilized phosphorylation sites in the cytoplasmic tail. Three isoform variants exist. One shows a deletion of aa 375-404, a second contains an 11 aa substitution for aa 737-747, and a third utilizes an alternative start site at Met137. Over aa 19-754, mouse PEAR1 shares 94% and 85% aa sequence identity with rat and human PEAR1, respectively.