Human CL-P1/COLEC12 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2690

DESCRIPTION

Species Reactivity	Human
Specificity	Detects CL-P1/COLEC12 in direct ELISAs and Western blots. In direct ELISAs, approximately 45% cross-reactivity with recombinant mouse CL-P1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CL-P1/COLEC12 isoform 1 Leu57-Leu742 Accession # Q5KU26
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.

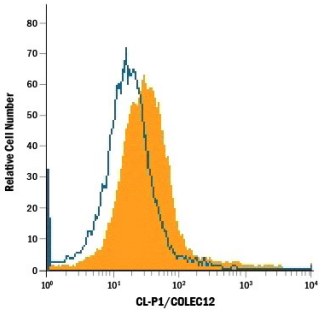
APPLICATIONS

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	0.1 µg/mL	Recombinant Human CL-P1/COLEC12 (Catalog # 2690-CL)
Flow Cytometry	2.5 µg/10^6 cells	See Below
Immunocytochemistry	5-15 µg/mL	Immersion fixed HUVEC human umbilical vein endothelial cells
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Blockade of Receptor-ligand Interaction	In a functional ELISA, 2-8 µg/mL of this antibody will block 50% of the binding of 250 ng/mL of biotinylated AGE-BSA to immobilized Recombinant Human CL-P1/COLEC12 (Catalog # 2690-CL) coated at 5 µg/mL (100 µL/well). At 100 µg/mL, this antibody will block >90% of the binding.	

DATA

Flow Cytometry



Detection of CL-P1/COLEC12 in HUVEC Human Cells by Flow Cytometry. HUVEC human umbilical vein endothelial cells were stained with Goat Anti-Human CL-P1/COLEC12 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2690, filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
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.** ● 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.

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BACKGROUND

Collectins are a family of Ca^{++}-dependent, C-type lectins that contain a collagenous domain and function as recognition molecules for molecular patterns found on pathogens (1-4). Human collectin placenta 1 (CL-P1; also known as collectin sub-family member 12 and SRCL type I [scavenger receptor with C-type lectin type I]) is a 110 kDa member of the collectin family of glycoproteins (5, 6). CL-P1 is the only collectin known to be membrane bound, while CL-L1 (collectin liver-1) is the only known cytoplasmic collectin (1). Human CL-P1 is synthesized as a 742 amino acid (aa) type II transmembrane glycoprotein that contains an N-terminal 39 aa cytoplasmic domain, a 17 aa transmembrane segment, and a 686 aa C-terminal extracellular region (6). The short cytoplasmic domain contains an internalization motif (Y-K-R-F) while the extracellular region is complex, demonstrating a coiled-coil segment, a Ser-Thr rich region, a collagen-like structure and a C-type lectin/carbohydrate recognition domain (CRD). Notably, this CRD recognizes galactose (and fucose) within the context of asialo-orosomucoids associated with the $Lewis^x$ epitope (7, 8). CL-P1 has a 300 kDa trimeric form due to its collagen-like and coiled-coil helical domains (1, 5). There is a 97 kDa, alternate splice form of CL-P1 (SRCL type II) that shows a 120 aa truncation at the C-terminus. This effectively removes the entire CRD found on full-length CL-P1 (6). Human CL-P1 is 93% aa identical to mouse CL-P1 over the entire extracellular region, and 87% aa identical over the CRD region (5, 9). Human CL-P1 is known to be expressed in vascular endothelial cells (5).

References:

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