Human CD6 PE-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: FAB627P
100 Tests

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human CD6 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CD6 His18-Glu398 Accession # Q8WWJ7
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

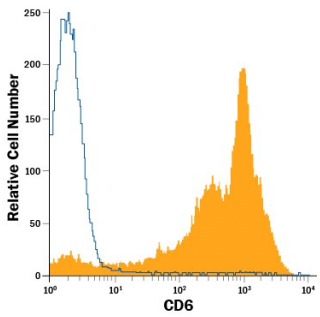
APPLICATIONS

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
Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of CD6 in Human Whole Blood Lymphocytes by Flow Cytometry. Human whole blood lymphocytes were stained with Goat Anti-Human CD6 PE-conjugated Antigen Affinity-purified Polyclonal Antibody (Catalog # FAB627P, filled histogram) or isotype control antibody (Catalog # IC108P, open histogram). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Human CD6 is a 105 kDa (unphosphorylated) -130 kDa (hyperphosphorylated) glycoprotein Group B member of the SRCR (Scavenger Receptor Cys-Rich) superfamily of molecules. It has a restricted expression pattern, being limited to select $CD56^{dim}$ NK cells, B1a B cells (IgM producers), thymocytes and virtually all resting T cells. Mature CD6 is a type I transmembrane protein 651 amino acids (aa) in length. It contains a 385 aa extracellular region (aa 19-402) that possesses three SRCR repeats, and a relatively long 245 aa cytoplasmic domain. There are at least six alternative splice forms for human CD6, four of which (plus the full-length form) contain an unspliced extracellular region. The isoform used here for immunization (SwissProt: Q8WWJ7) is one of these four, showing splicing only in the cytoplasmic region. Thus, the polyclonal antibody used here will recognize all full-length CD6 molecules, and may, by an absence of staining, suggest the presence of the two isoform variants that are missing the third SRCR repeat that lies between aa 259-361. CD6 has multiple interaction partners. It complexes with CD5 *in cis*, contributing to the immunological synapse; *in trans*, it binds to dendritic cell CD166/ALCAM on the surface of adjacent cells. CD6 is also known to bind soluble galectin-1 and -3, and to bind the PAMPs associated with pathogenic microbes. Notably, on T cells and following activation, full-length CD6 is downregulated, and a splice variant lacking the third SRCR is upregulated, abrogating any CD6:CD166 interaction. Functions attributed to CD6 include the induction of chemokine secretion by NK cells, costimulation of antigen recognition by T cells, and an antimicrobial activity attributed to an 85 kDa soluble form of CD6. Over aa 18-398, human and mouse CD6 share 68% aa sequence identity.

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