

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD5 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CD5 Arg25-Asn371 Accession # P06127
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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	0.5 µg/mL	See Below
Agonist Activity	2-8 µg/mL	See Below
Flow Cytometry	0.25 µg/10 ⁶ cells	Human whole blood lymphocytes
Immunocytochemistry	5-15 µg/mL	See Below
Simple Western	10 µg/mL	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 Human CD5 by Western Blot. Western blot shows lysates of Jurkat human acute T cell leukemia cell line and CEM human T-lymphoblastoid cell line. PVDF membrane was probed with 0.5 µg/mL of Goat Anti-Human CD5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1636) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for CD5 at approximately 67 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Agonist Activity

Human CD5 Antibody Enhances IL-2 Secretion in Human T Cells. Human CD5 Antigen Affinity-purified Polyclonal Antibody enhances IL-2 secretion in human T cells in the presence of sub-optimal amounts of Human CD3ε Monoclonal Antibody (Catalog # MAB100) and Human CD28 Monoclonal Antibody (Catalog # MAB342), in a dose-dependent manner, as measured using the Quantikine Human IL-2 ELISA Kit (Catalog # D2050). The ED₅₀ for this effect is typically 2-8 µg/mL.

Immunocytochemistry

CD5 in Human PBMCs. CD5 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using Goat Anti-Human CD5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1636) at 5 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces. View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

Simple Western

Detection of Human CD5 by Simple Western™. Simple Western lane view shows lysates of CEM human T-lymphoblastoid cell line, loaded at 0.2 mg/mL. A specific band was detected for CD5 at approximately 93 kDa (as indicated) using 10 µg/mL of Goat Anti-Human CD5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1636). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

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. <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

CD5, also known as Leu-1, is a type I transmembrane protein belonging to the scavenger receptor cysteine-rich (SRCR) superfamily. It is expressed on thymocytes, T cells and the B1a subpopulation of B cells. CD5 binds the C-type lectin, CD72, and modulates signaling through the antigen receptors on T and B cells. CD5 has been shown to provide either positive or negative co-stimulatory signals depending on cell type to regulate immune responses.

References:

1. Ledbetter, J.A. *et al.* 1985, J. Immunol. **135**:2331.
2. Damle, N.K. *et al.* 1988, J. Immunol. **140**:1753.