

DESCRIPTION

Species Reactivity	Human
Specificity	Detects the CD57 carbohydrate epitope in Human PBMCs
Source	Monoclonal Mouse IgG _{2B} Clone # 1088014
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Whole Cell Accession # Q9P2W7
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *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.

Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

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

CD57 is a glycoprotein with a molecular weight of approximately 100 kDa, classified within the group of adhesion molecules. It plays a significant role in immune regulation and cellular interactions, particularly influencing the functioning of natural killer (NK) cells and certain T-cells. CD57 is heavily involved in the biological processes of cytotoxic activity and immune response modulation. Altered levels of CD57 expression have been associated with several pathological conditions, including chronic infections, autoimmune diseases, and various malignancies. Crucially, CD57 serves as a key biomarker for immune senescence and the monitoring of NK cell and T-cell activities in diseases such as HIV and cancer.

References:

- Kared H, Martelli S, Ng TP, Pender SL, Larbi A. CD57 in human natural killer cells and T-lymphocytes. *Cancer Immunol Immunother.* 2016 Apr;65(4):441-52. doi: 10.1007/s00262-016-1803-z. Epub 2016 Feb 5. PMID: 26850637; PMCID: PMC11029668.
- Elias Junior E, Gubert VT, Bonin-Jacob CM, Puga MAM, Gouveia CG, Sichinel AH, Tozetti IA. CD57 T cells associated with immunosenescence in adults living with HIV or AIDS. *Immunology.* 2024 Jan;171(1):146-153. doi: 10.1111/imm.13707. Epub 2023 Oct 25. PMID: 37880915.
- Lian J, Yue Y, Yu W, Zhang Y. Immunosenescence: a key player in cancer development. *J Hematol Oncol.* 2020 Nov 10;13(1):151. doi: 10.1186/s13045-020-00986-z. Erratum in: *J Hematol Oncol.* 2025 Mar 5;18(1):25. doi: 10.1186/s13045-025-01682-6. PMID: 33168037; PMCID: PMC7653700.

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