

Datasheet: MCA1305GA

BATCH NUMBER 173788

Description:	MOUSE ANTI HUMAN CD57
Specificity:	CD57
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	TB01
Isotype:	IgM
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/50 - 1/100
Immunohistology - Frozen	▪			1/10 - 1/100
Immunohistology - Paraffin (1)	▪			1/10 - 1/50
ELISA			▪	
Immunoprecipitation		▪		
Western Blotting		▪		

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

(1) This product does not require antigen retrieval using heat treatment prior to staining of paraffin sections but sodium citrate buffer may enhance staining.

Target Species	Human
Product Form	Purified IgM - liquid
Preparation	Purified IgM prepared by ion exchange chromatography from ascites
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% sodium azide (NaN ₃)

Approx. Protein Concentrations	IgM concentration 1mg/ml
Immunogen	Human neuroblastoma cells.
RRID	AB_2063195
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse P3.X63 Ag8.653 myeloma cell line.
Specificity	Mouse anti Human CD57 antibody, clone TB01, recognizes CD57, also known as HNK-1, Leu-7 and NK-1. CD57 is an oligosaccharide antigenic determinant present on a variety of polypeptides, lipids and chondroitin sulphate proteoglycans. It is expressed on a subset of peripheral blood lymphocytes, including CD8+ T cells and NK cells. The function of CD57 is poorly understood. CD57 binding to laminin and certain selectins suggests it may be involved in cell-cell and cell-matrix interactions. CD57 is used as a marker for terminally differentiated 'senescent' cells with reduced proliferative capacity and altered functional properties. CD57 expression in CD8+ cells identifies those with reduced proliferative responses to T cell receptor triggering and increased susceptibility to antigen-induced apoptosis. CD57+ T lymphocytes are found at a higher frequency in a variety of diseases. CD57 expression is increased on chronically activated CD8+ T cells in persistent viral infections, such as HIV. Mouse anti human CD57, clone TB01, is also available as a recombinant antibody (TZA1305).
Flow Cytometry	Use 10µl of the suggested working dilution to label 10 ⁶ cells in 100µl.
Histology Positive Control Tissue	Human tonsil
References	1. Funaro, A. <i>et al.</i> (1995) Epitope analysis of human CD57 by means of a panel of newly-generated high-affinity murine monoclonal antibodies. In: Leucocyte Typing V: White Cell Differentiation Antigens. 2. Funaro, A. <i>et al.</i> (1995) Human CD57, a link molecule between leucocyte and neural cells. In: Leucocyte Typing V: White Cell Differentiation Antigens. 3. Slyker, J.A. <i>et al.</i> (2011) Phenotypic Characterization of HIV-Specific CD8 T Cells during Early and Chronic Infant HIV-1 Infection. PLoS One. 6: e20375. 4. Nunes, C. <i>et al.</i> (2012) Expansion of a CD8+PD-1+ Replicative Senescence Phenotype in Early Stage CLL Patients Is Associated with Inverted CD4:CD8 Ratios and Disease Progression. Clin Cancer Res. 18: 678-87. 5. Khan, N. <i>et al.</i> (2002) Cytomegalovirus seropositivity drives the CD8 T cell repertoire toward greater clonality in healthy elderly individuals. J Immunol. 169: 1984-92. 6. Alejñef, A. <i>et al.</i> (2014) Cytomegalovirus drives Vδ2neg &gammaδ T cell inflation in many healthy virus carriers with increasing age. Clin Exp Immunol. 176 (3): 418-28.

7. Frahm, M. *et al.* (2012) CD4+CD8+ T cells represent a significant portion of the anti-HIV T cell response to acute HIV infection. [J Immunol. 188: 4289-96.](#)
8. Wang, Y. *et al.* (2009) Characteristics of expanded CD4+CD28null T cells in patients with chronic hepatitis B. [Immunol Invest. 38: 434-46.](#)
9. Lim, H.W. and Kim, C.H. (2007) Loss of IL-7 receptor alpha on CD4+ T cells defines terminally differentiated B cell-helping effector T cells in a B cell-rich lymphoid tissue. [J Immunol. 179: 7448-56.](#)
10. Björkström, N.K. *et al.* (2012) CD8 T cells express randomly selected KIRs with distinct specificities compared with NK cells. [Blood. 120: 3455-65.](#)
11. Slyker, J.A. *et al.* (2012) The impact of HIV-1 infection and exposure on natural killer (NK) cell phenotype in Kenyan infants during the first year of life. [Front Immunol. 3: 399.](#)
12. Perlingeiro Beltrame, M. *et al.* (2014) Immune reconstitution in patients with Fanconi anemia after allogeneic bone marrow transplantation. [Cytotherapy. 16: 976-89.](#)
13. Suárez, G.M. *et al.* (2021) Associations among cytokines, EGF and lymphocyte subpopulations in patients diagnosed with advanced lung cancer. [Cancer Immunol Immunother. 70 \(6\): 1735-43.](#)

Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA1305GA
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgM (STAR138...) [Alk. Phos.](#)

Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)

Recommended Negative Controls

[MOUSE IgM NEGATIVE CONTROL \(MCA692\)](#)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
"M409141:221017"

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