

T cell Biology Research Tools

InnoCyto

High-quality antibodies and recombinant proteins for immunology, oncology, and cell therapy research

WHY INNOCYTO FOR T CELLS?

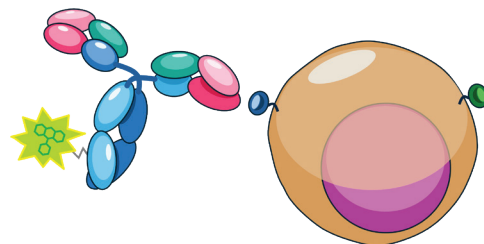
InnoCyto stands out by delivering high-performance reagents engineered for strong affinity and reliable production, paired with exceptional lot-to-lot consistency through precise, site-specific conjugation. Every product undergoes rigorous in-house validation using physiological samples to ensure dependable quality and reproducibility. With this combination of scientific rigor and robust engineering, InnoCyto provides premium-grade reagents at highly competitive prices, offering unmatched value for researchers.

KEY APPLICATIONS

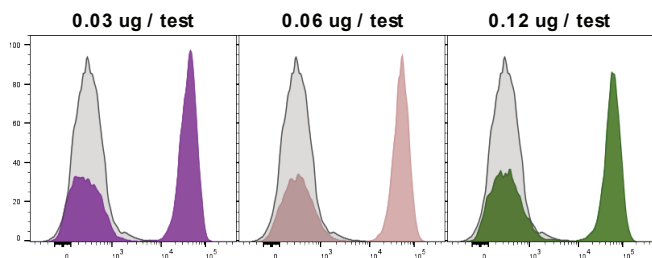


FLOW CYTOMETRY ANTIBODIES

Our portfolio includes antibodies targeting key T cell markers such as CD3, CD4, CD8, CD25, CD69, PD-1, and CTLA-4. Our highly purified antibodies are directly conjugated to a selection of fluorophores with each lot quality tested by flow cytometry. Each reagent is designed to integrate seamlessly into your flow cytometry workflow, delivering consistent results for both academic and translational research.

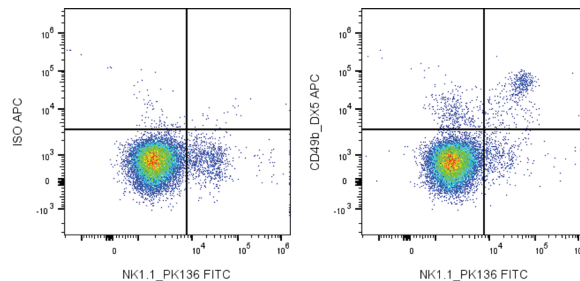


High Sensitivity iF488 anti-CD3 Staining



iF488 anti-CD3, clone UCHT1, (Cat# 109016) staining of human PBMCs, reveals high resolution signals at ultra-low antibody concentrations.

APC anti-Mouse CD49b Staining



Mouse splenocytes were stained with FITC Anti-mouse NK1.1 clone PK136 and either APC Anti-Mouse CD49b clone DX5 (Cat# 202607, right panel) or an isotype control (left panel), revealing a distinct NK cell population.

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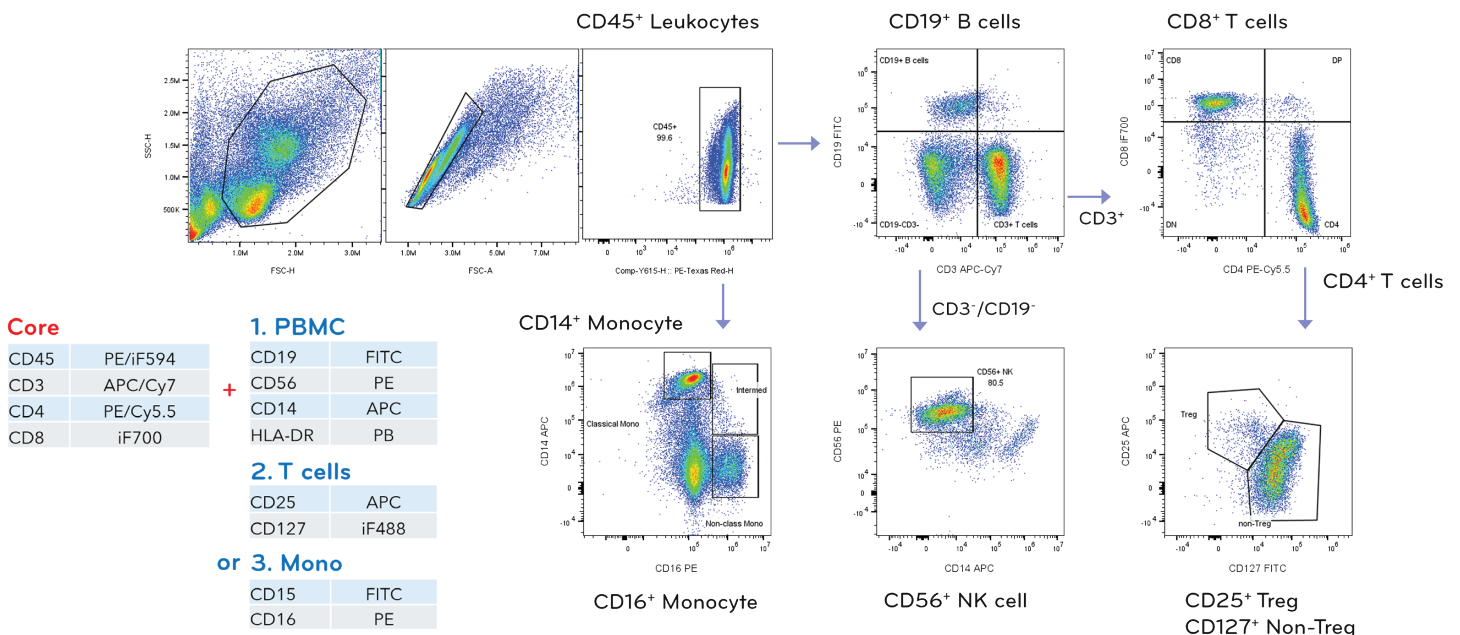
Catalyzing Discovery with
Trusted Reagents for Cell-
Based Research

Featured T cell Antibodies

To view all products, visit:
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Antigen	Clones	Formats
Human CD3, T3, CD3ε	Hit3a, OKT3, SK7, UCHT1	APC, APC/Cyanine7, Biotin, FITC, PB, PE, PE/Cyanine7, PE/iF594, PerCP/Cy5.5, Purified, iF488, iF647, iF700
Human, NHP CD3, T3, CD3ε	SP34	APC, Biotin, FITC, PE, Purified, iF488, iF647
Mouse CD3, T3, CD3ε	145-2C11, 17A2, KT3	APC, Biotin, FITC, LENP, PE, Purified, iF488, iF647
Human CD4, T4, Leu3a	004AB, OKT4-Rec, RPA-T4, SK3	APC, Biotin, FITC, PE, PE/Cyanine 5.5, Purified, iF488, iF560, iF647
Mouse CD4, T4, Leu3a	GK1.5	APC, Biotin, FITC, PE, Purified, iF488, iF647
Human CD8, T8, Leu2	OKT8, RPA-T8, SK1, 008aAB	APC, Biotin, FITC, PE, Purified, iF488, iF560, iF647, iF700
Mouse CD8, CD8α, T8	53-6.7	APC, Biotin, FITC, PE, Purified, iF488, iF647
Human CD25, IL-2Rα chain, Low affinity IL-2R	BC96, M-A251	APC, FITC, PE, Purified, iF488, iF647
Human CD28, Tp44	028AB, CD28.2	APC, Biotin, FITC, PB, PE, Purified, iF488, iF647
Human CD29, Integrin β-1, VLA-β chain, ITGB1	K20	APC, Biotin, FITC, PB, Purified, iF488, iF647
Human CD38, gp45, ADP-ribosyl cyclase	HB-7, HIT2	APC, FITC, PE, Purified, iF488, iF647
Human CD45, LCA, T200	HI30, 045AB, 2D1	APC, Biotin, FITC, PE, PE/Cyanine 5.5, PE/iF594, Purified, iF405, iF488, iF560, iF647
Human, Mouse CD45R, B220	RA3-6B2	Biotin, FITC, PE, PE/Cyanine7, Purified, iF488, iF647
Human CD45RA, GP180, LY5, LCA, PTPRC	HI100	APC, Biotin, FITC, PE, Purified, iF647
Mouse CD49b, Integrin α2 chain, ITGA2	DX5, DX5_R	APC, PE, Purified, iF647
Human CD56, Leu-19, NKH1	056EM1, CD56H	APC, FITC, PE, Purified, iF488, iF647
Human CD57, HNK-1, Leu-7, NK-1	HNK-1	FITC, Purified, iF647
Human CD127, IL-7 receptor α chain, IL-7Rα	127AB, 127AM1	APC, PB, PE, PE/Cyanine7, Purified, iF488, iF560, iF647
Human CD197, CCR7	197AM2a, 197AR2a	APC, Biotin, FITC, PE, Purified, iF488, iF647
Mouse CD198, CCR8, CC-CKR-8, Ter1	m198AR2b	Biotin, FITC, Purified, iF488, iF647
Mouse CD274, PD-L1, B7-H1	10F.9G2	APC, Biotin, FITC, PE, Purified, iF647
Human CD279, PD1, PD-1	279AM1, EH12.2H7	Purified, iF560, iF647
Human IFN-γ, IFN-gamma, Interferon-γ	4S.B3	FITC, PE, Purified, iF488, iF647
Human IL-4, Interleukin-4, MCGF-2	MP4-25D2	Purified, iF647
Human TCR Vβ13.1	H131	APC, FITC, PE, Purified, iF488, iF647
Human TCR Vβ5.2/5.3	MH3-2	PE, Purified, iF647
Human TCRβV3.1	JOVI-3	Purified, iF488, iF647
Mouse TCR β chain, TCR-β	H57-597-M2a, H57-597-R1	APC, FITC, PE, Purified, iF488, iF647

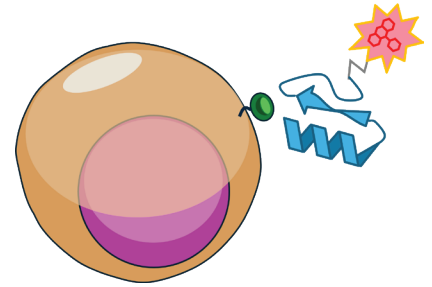
Human PBMC Immunophenotyping Panels



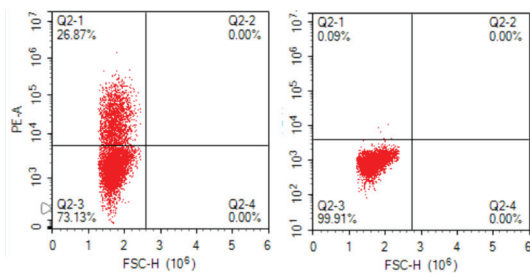
FLUORESCENCE LABELED PROTEINS

Designed to support immunology, immunotherapy, and cell-therapy development workflows, this category includes chimeric receptor proteins, ligand-receptor pairs, and engineered binding domains to aid assay development, screening, and validation of immune-based therapeutics such as CAR-T cells.

- Recombinant ligands and receptors with verified binding affinity and functionality
- Fusion constructs (Fc, His) facilitating immobilization, detection, or downstream assay work
- Formats compatible with flow cytometry, cell signaling assays, screening platforms
- Customizable variants (mutants, species orthologs, tag options) to support translational research

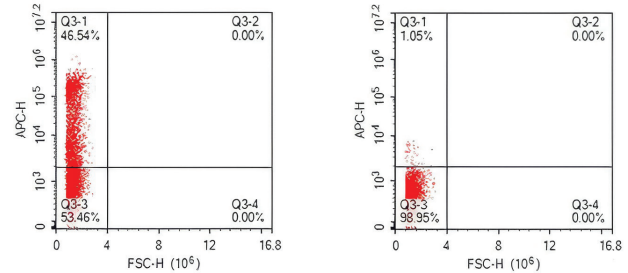


Validation of anti-BCMA CAR-T Expression



CHO cells transfected with either BCMA CAR (left) or Mock plasmid (right) were stained with PE conjugated BCMA (C-Fc) protein at 4 µg/test.

Validation of anti-Mesothelin CAR-T Expression



CHO cells transfected with either Mesothelin CAR (left) or Mock plasmid (right) were stained with APC conjugated Mesothelin (C-His) protein at 4 µg/test.

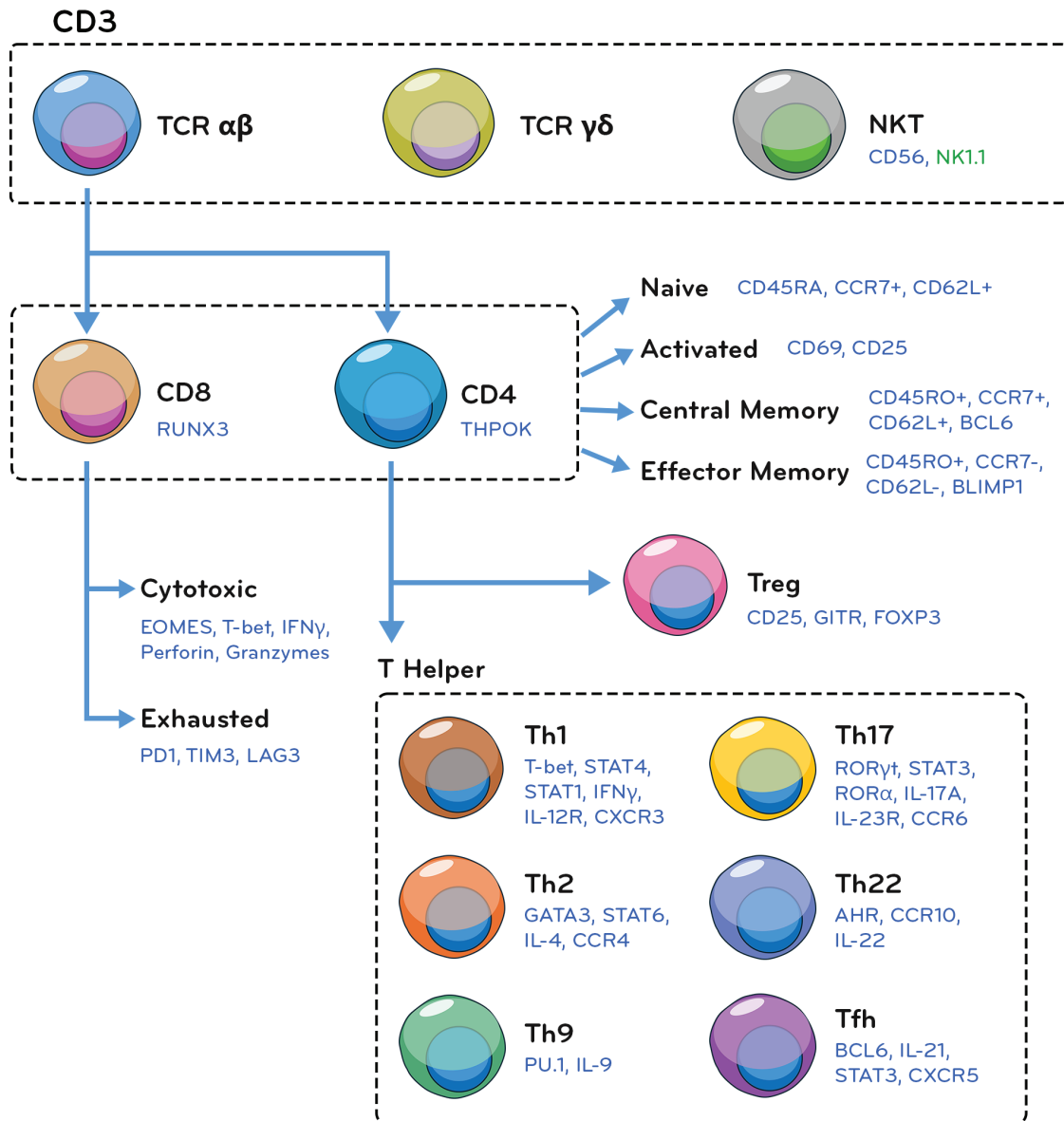
Featured Proteins

Protein Name	Species	Format
Annexin A5	All	APC, Biotin, FITC, PB, PE, Purified, iF488, iF647
B7-H5, SISP1, Gi24, VISTA	Hu	APC, Biotin, PE, Purified
CD20, B1, Bp35, MS4A1	Hu	APC, PE
CD22, SIGLEC2, BL-CAM	Hu	APC, Biotin, PE, Purified
CD25, IL2RA, p55	Hu, Cyno	APC, Biotin, PE, Purified
CD32a, FCGR2A, FCG2	Hu	APC, Biotin, PE, Purified
CD32b/c, FCGR2B, C, FcRII-b, c	Hu	APC, Biotin, PE, Purified
CD73, NT5E	Hu	APC, Biotin, PE, Purified
CD80, B7-1, B7, BB1	Hu	APC, Biotin, PE, Purified
CD86, B7-2, B70, CD28LG2	Hu	APC, Biotin, PE, Purified
CD134, TNFRSF4, OX40	Hu, Cyno, Ms	APC, Biotin, PE, Purified
CD137, TNFRSF9, 4-1BB	Hu	APC, Biotin, PE, Purified
CD152, CTLA4	Hu	APC, Biotin, PE, Purified
CD200, MOX1, MOX2, MRC, OX-2	Hu, Cyno, Ms	APC, Biotin, PE, Purified

Protein Name	Species	Format
CD200R, CRT2R, MOX2R, OX2R	Hu, Ms	APC, Biotin, PE, Purified
CD213A2, IL13RA2, IL-13R, IL13BP	Hu	APC, Biotin, PE, Purified
CD269, TNFRSF17, BCMA	Hu	APC, Biotin, PE, Purified
CD273, PDL2, Butyrophilin B7-DC	Human	APC, Biotin, PE, Purified
CD274, PD-L1, B7-H1, PDCD1L1	Hu, Rhesus	APC, Biotin, PE, Purified
CD279, PD1, PDCD1, SLEB2	Hu	APC, Biotin, PE, Purified
CD326, EPCAM, TROP1, TACSTD1	Hu	APC, Biotin, PE, Purified
CD340, HER2, ERBB2, NEU	Hu	APC, Biotin, PE, Purified
FOLR-1, FBP, FOLR, FRα	Human	APC, Biotin, PE, Purified
GPC3, GTR2-2, MXR7, SDYS	Human	APC, Biotin, PE, Purified
Mesothelin, MPF, MSLN	Hu	APC, Biotin, PE, Purified
TIM3, HAVCR2	Hu	Biotin, Purified
TNFSF18, GITR Ligand, AITRL, TL6	Hu	Biotin, Purified
TROP2, TACSTD2, MIS1	Hu	APC, Biotin, PE, Purified

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CHARACTERIZE T CELL SUBSETS



This diagram outlines the major subsets and differentiation pathways of T cells, emphasizing their phenotypic markers and transcriptional regulators. Starting from CD3⁺ T cells expressing either $\alpha\beta$ or $\gamma\delta$ T cell receptors (TCRs), $\alpha\beta$ T cells differentiate into CD8⁺ cytotoxic and CD4⁺ helper lineages, driven by transcription factors RUNX3 and THPOK, respectively. CD8⁺ cells adopt cytotoxic (EOMES, T-bet, IFN γ , perforin, granzymes) or exhausted (PD1, TIM3, LAG3) phenotypes. CD4⁺ T cells can become regulatory T cells (Tregs; FOXP3, CD25, GITR) or various T helper (Th) subsets including Th1, Th2, Th9, Th17, Th22, and Tfh, each defined by specific cytokines, transcription factors, and cell surface markers. Also highlighted are memory and activation states—naïve, activated, central memory, and effector memory—based on surface marker profiles. T cells are essential to adaptive immune responses through a diverse cellular and regulatory network.

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