



NK cells by Miltenyi Biotec

Optimize your workflow

- Fast and easy isolation of pure NK cells subsets for research use
- Viable NK cells suited for any downstream application
- Optimized flow cytometry reagents for phenotyping and functional analyses
- Smooth translation into clinical settings using our clinical reagents*

► miltenyibiotec.com/nkcell-workflow



Sample preparation

- Dead Cell Removal Kit
- MACS® Tissue Dissociation Kits
- Red Blood Cell Lysis Solution
- Smart Strainers
- gentleMACS™ Dissociators

Mouse

Isolation of NK cells

- **PBMCs:**
CD49b (DX5) MicroBeads
NK Cell Isolation Kit II
NK1.1⁺ iNKT Cell Isolation Kit
Anti-NKp46 MicroBead Kit

Culture of NK cells

- **Cytokines:**
IL-2, IL-12, IL-15
- **Activation:**
Anti-Ly49I pure – functional grade

Phenotyping and flow cytometry

- **Antibodies:**
NK cell receptors:
CD49b (DX5), Anti-NKp46, Anti-NK1.1, Anti-NKG2A/C/E, Anti-Ly49, CD244 (2B4), Anti-KLRG1 (MAFA)
Transcriptional control:
Anti-EOMES, Anti-GATA-3, Anti-Helios, Anti-TOX, Anti-T-bet
- **Cytokine profiling:**
Cytokine Secretion Assay – Detection Kits: IFN- γ , IL-2, MACSPlex Cytokine 10 Kit

Human

Isolation of NK cells

- **Whole blood:**
Whole Blood CD56 MicroBeads, MACSxpress NK Cell Isolation Kit
- **PBMCs:**
CD56 MicroBeads, NK Cell Isolation Kit
CD3⁺CD56⁺ NKT Cell Isolation Kit
CD56 subsets isolation kits (CD8⁺/CD8⁻, CD16⁺, CD16⁻, CD57⁺)

Culture of NK cells

- **Medium:**
NK MACS Medium
- **Cytokines:**
IL-2, IL-12, IL-15, IL-21
- **Activation:**
NK Cell Activation/Expansion Kit
CD335 (NKp46) – functional grade
CD337 (NKp30) – functional grade

Phenotyping and flow cytometry

- **Antibodies:**
NK cell receptors:
CD56, CD94, CD8, CD16
Activating receptors:
Anti-NKp46, Anti-NKp44, Anti-NKp30, Anti-DNAM-1, Anti-NKG2D
Inhibitory/activating receptors:
CD244 (2B4), CD158 (KIR) specific antibodies
Killing machinery:
Anti-Granzyme B, Anti-Perforin, CD107a, Anti-TRAIL, LFA-1
Transcriptional control:
Anti-GATA-3, Anti-Helios, Anti-TOX, Anti-T-bet
- **Antibodies cocktails:**
MC CD56 NK Cell Cocktail (only after NK Cell Isolation Kit)
- **Cytokine profiling:**
Cytokine Secretion Assay – Detection Kits: IFN- γ , IL-2, MACSPlex Cytokine 12 Kit

* Translate research into clinical applications:

- MACS GMP Cytokines
- CliniMACS® Systems
- CliniMACS Reagents, including CD56 and CD3



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