



AKADEUM
LIFE SCIENCES

Microbubble Leukopak Human T Cell Isolation Kit

By any standard, the best leukopak cell isolation product ever made.



BACS™ Leukopak T Cell Isolation | The Advantage

SAVE TIME AND PERSONNEL RESOURCES WITH RAPID PROTOCOL

Under 1 hour from leukopak bag to pure T cells, making it possible to process multiple leukopaks per shift

ELIMINATE COMPLEXITY AND POTENTIAL FOR ERROR

Spare cells from exposure to Ficoll, RBC lysis reagents, and unnecessary handling as RBCs and platelets are naturally removed

EXPERIENCE TRUE BIOLOGY

Most delicate cell isolation mechanism developed to date

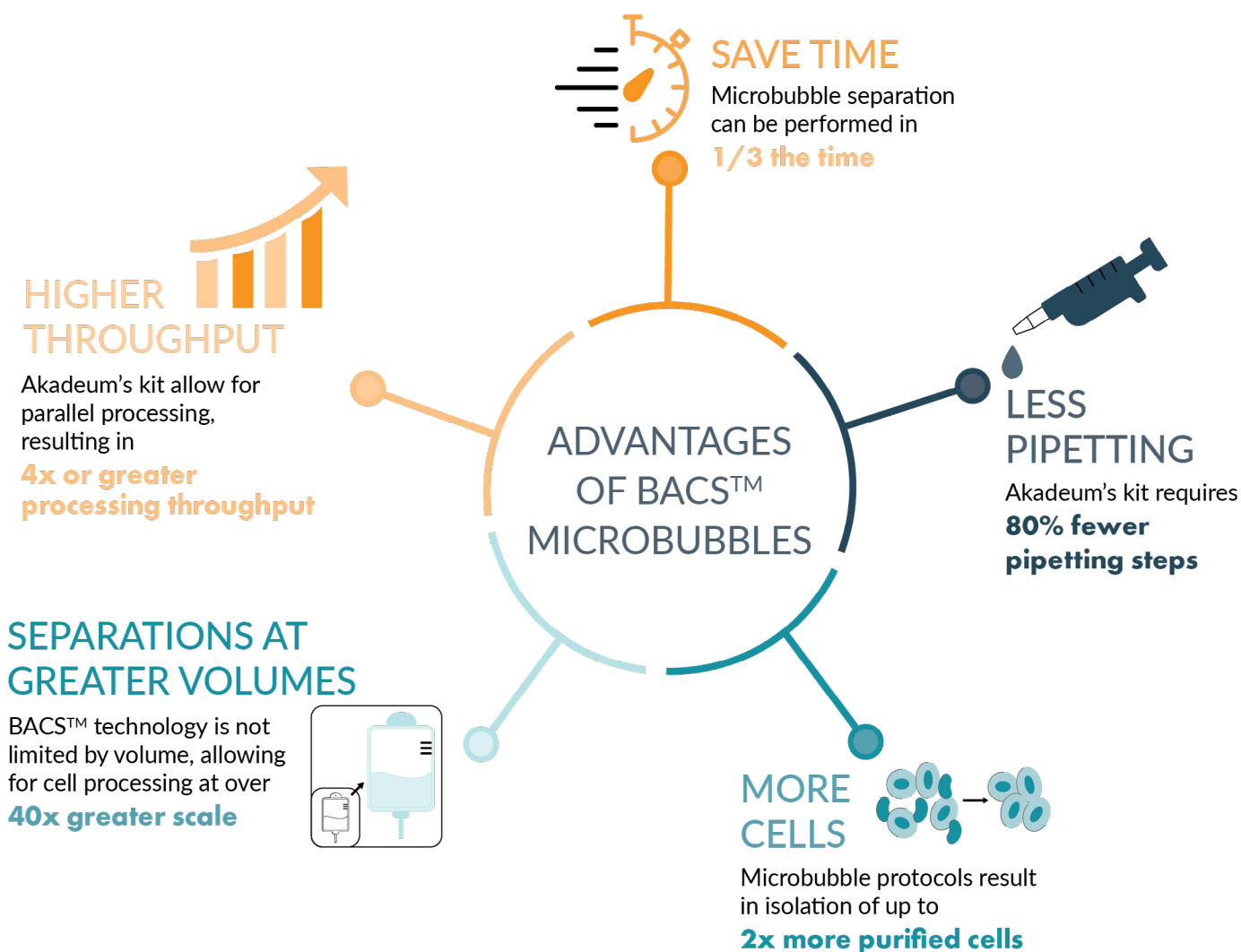
GET THE MOST OUT OF EVERY LEUKOPAK

Industry leading recovery ensures maximal yield of T cells

INSERT INTO ANY WORKFLOW

Uniquely scalable platform with high-degree of compatibility with existing systems

BACS™ LEUKOPAK KIT OUTPERFORMS COMPARABLE WORKFLOWS

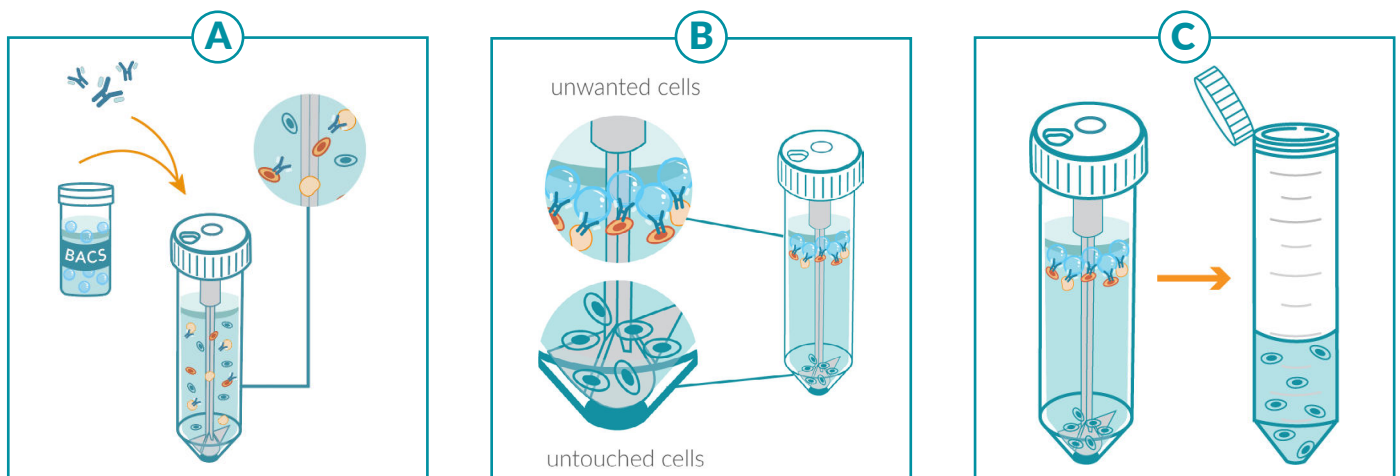


BACS™ Leukopak T Cell Isolation | The Technology

Akadeum's microbubble technology overcomes long-standing headaches in sample preparation. Applying this technology to leukopak workflows allows for the isolation of more cells in less time.

HOW IT WORKS

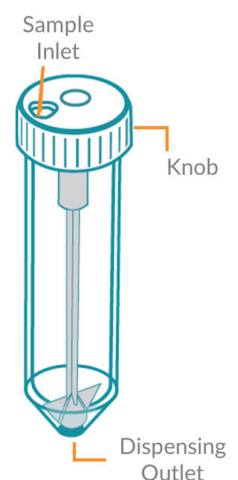
Akadeum's Microbubble Leukopak Human T Cell Isolation Kit utilizes a fast and easy workflow, allowing scientists to go from leukopak bag to cells in under 60 min. [A] The leukopak material is first aliquotted into microbubble separation tubes, then biotinylated antibodies and streptavidin microbubbles are sequentially added. [B] The biotinylated antibodies bind to RBCs and unwanted cells, which are subsequently bound to streptavidin microbubbles. Leveraging their innate power of flotation, the microbubbles gently carry the unwanted cells to the surface. [C] Untouched T cells are then drained from the bottom of the separation tube, leaving the viable cells of interest untouched and ready for downstream use.



INNOVATION IN ISOLATION : THE MICROBUBBLE SEPARATION TUBE

The leukopak isolation kit incorporates our novel microbubble separation tubes for sample loading, separation, and dispensing in a single tube.

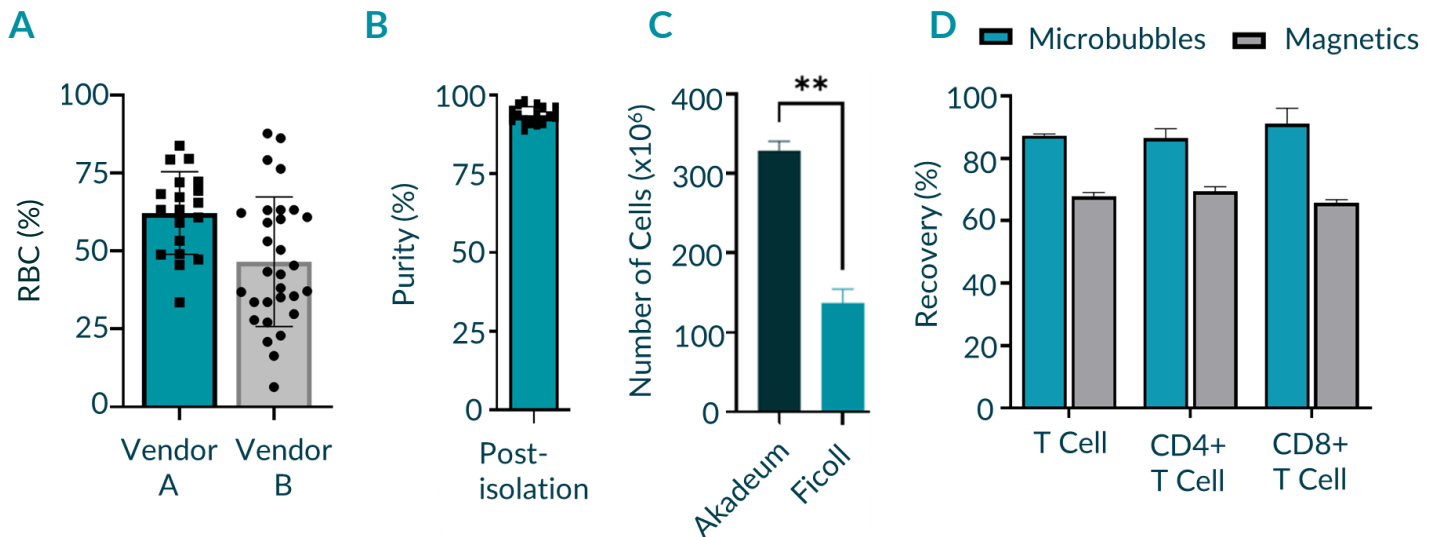
- **Sample inlet** provides an easy loading port for samples, antibodies, and microbubbles
- **Knob** enables closing of the sample inlet, rotation of fins, and opening of dispensing outlet to maximize yields
- **Dispensing outlet** allows hassle-free collection of pelleted T cells



BACS™ Leukopak T Cell Isolation | Applications

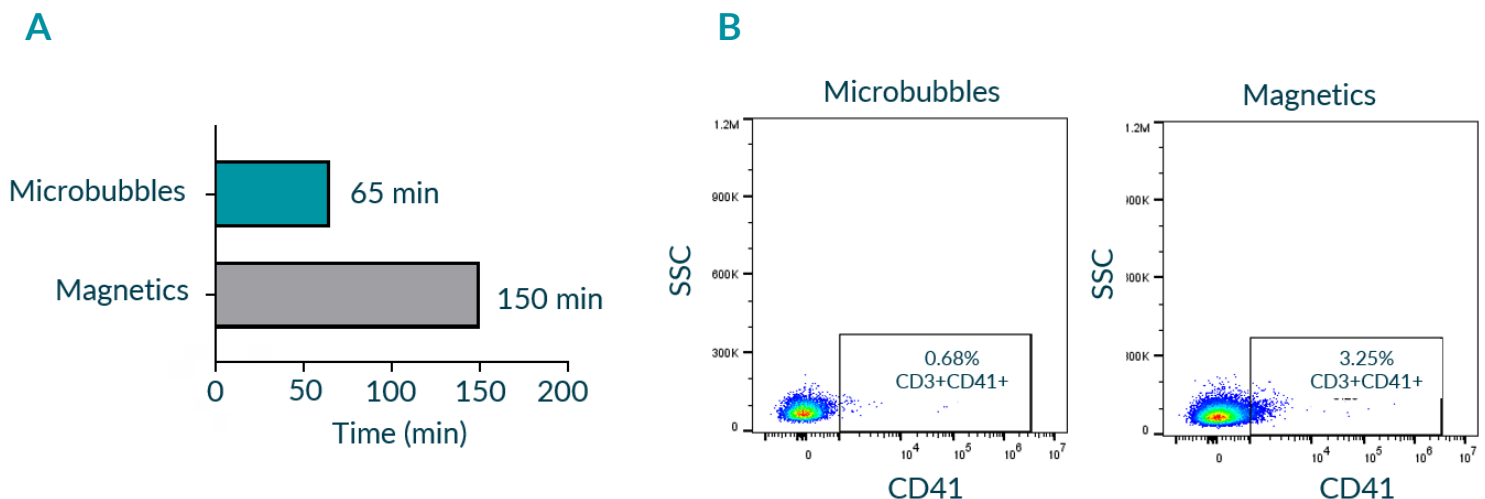
HIGH PURITY, HIGHER YIELD

The frequency of red blood cells (RBCs) and white blood cells (WBCs) in leukopaks varies greatly between donors and [A] suppliers. Despite this inherent unpredictability in composition, [B] Akadeum's Microbubble Leukopak T Cell Isolation Kit consistently provides high purity. Additionally, in head-to-head comparisons with competitive methods, Akadeum's workflow routinely results in [C] **2x more isolated cells** compared to Ficoll isolations and [D] **20% more purified T cells** than magnetics kits.



FASTER ISOLATION OF CLEANER CELLS

Effective workflows rely on high-quality samples, free from off-target contamination. In less than **1/2 the time** a cleaner population of T cells containing **80% fewer bound platelets** was obtained with the Microbubble Leukopak Human T Cell Isolation Kit.



BACS™ Leukopak T Cell Isolation | Applications

RELIABLE PERFORMANCE VALIDATED ACROSS INDUSTRIES

Robust and reproducible results have been confirmed by early adopters across a broad set of industries. Key findings confirm [A-B] high purity and [C] fast-processing results and additionally demonstrate [D] better recovery of T cells following cryopreservation.

A

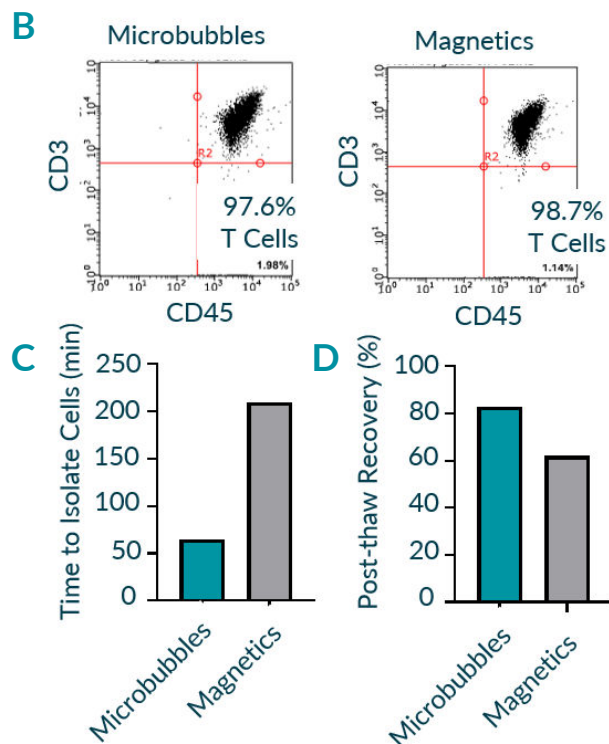
Early Adopter	Post-Isolation Purity
Biospecimen Provider	98%
Blood Bank	96%
Contract Research Org.	92%
CGT Biopharmaceutical Developer	97%
Medical Research Institute	98%
CGT Technology Company	96%

"I HAVEN'T BEEN THIS EXCITED ABOUT CELL ISOLATION IN QUITE A WHILE"

- IMMUNOLOGY SPECIALIST

"REALLY IMPRESSED"

- PRIMARY PROCESS DEVELOPMENT SCIENTIST



AVERAGE PURITY





Over 96%

SPEED

66% Less Time

POST-THAW RECOVERY

33% More Cells

Isolation Vessel	Cell Number	Volume	Post-Isolation Purity
	10 Million	1 mL	95.2%
	1 Billion	50 mL	95.5%
	10 Billion	250 mL	94.3%
	100 Billion or more	10 L or more	Easily Scalable Results

HIGHLY SCALABLE WITH OPEN AND CLOSED SYSTEMS

A key advantage of BACS™ technology is that it is not limited to constraints on processing volumes. As such, separation with Akadeum's Microbubbles can be performed within a wide range of isolation containers, allowing for unmatched versatility and processing scale, without sacrificing isolation

Akadeum Life Sciences | About Us

Akadeum has developed the next generation in cell separation using buoyancy-activated cell sorting (BACS) microbubbles. These microbubbles have revolutionized cell separation, allowing scientists to develop treatments in a fraction of the time of previous workflows. Experience the microbubble difference for yourself! Book a meeting with our expert scientific staff to discuss your application, or shop our Microbubble Leukopak Human T Cell Kit and other Microbubble Products online at www.akadeum.com.

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