Applied Cells

MARS® MAG LINE

Rapid No-Wash, column-free cell isolation

MARS MAG LINE is a family of reagents that use anti-PE Magnetic Nanobeads to capture PE-labeled subpopulations of white blood cells. The reagents have been shown to enable fast and easy isolation of T cells, B cells, Monocytes, Neutrophils, Rare Cells, MRDs, DTCs, and many others. Developed exclusively for the MARS instrument MAG modules, together they provide an integrated cell isolation solution that is especially applicable to areas of immunophenotyping, tumor biology, cell therapy development, and genomics.

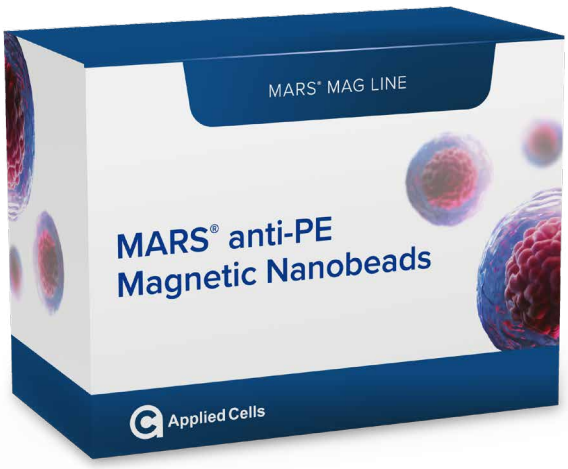
Although magnetic cell separation is one of the simplest methods to isolate highly purified specific cells of interest, many solutions suffer from a requirement of complex protocols, low cell purity and/or recovery, or are expensive. MARS systems address these shortcomings and deliver a fast, gentle and efficient cell isolation.

FAST ISOLATION

A Typical ADD-ADD-RUN workflow includes 35 min of labeling and column-free cell isolation at the speed of 1ml/min. Compare this to multi-step protocols for other column-based assays. Using the MARS Bar instrument with 3 separate Magnetic modules you can process 3 independent samples in parallel.

ECONOMICAL SOLUTION

Typically, only 5 µL of beads allow capturing 1-1.5M of PE-labelled cells of interest from Whole Blood. Our solution means no need for RBC lysis, and the flexibility to use the same MARS anti-PE Nanobeads for capturing different PE-labeled cell populations.

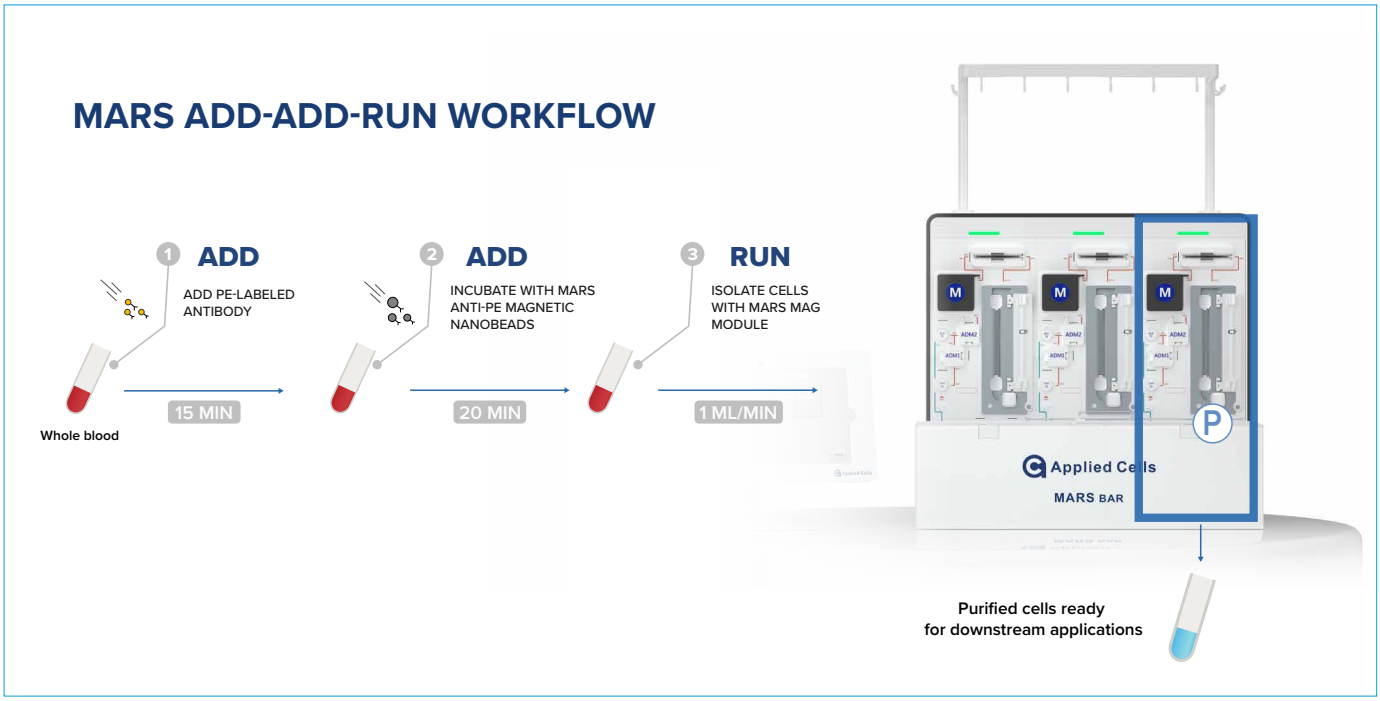


EASY WORKFLOW

Isolating cells with the MARS integrated solution uniquely allows for a no-lyse, no-wash protocol, greatly accelerating the isolation speed and providing gentle sample treatment. The simple ADD-ADD-RUN protocol is exquisitely easy.

FLEXIBLE PROTOCOL

Capture and purify any subpopulation of PE-labelled white blood cells with the highest recovery, with no need for subset-specific antibodies conjugated to magnetic beads.



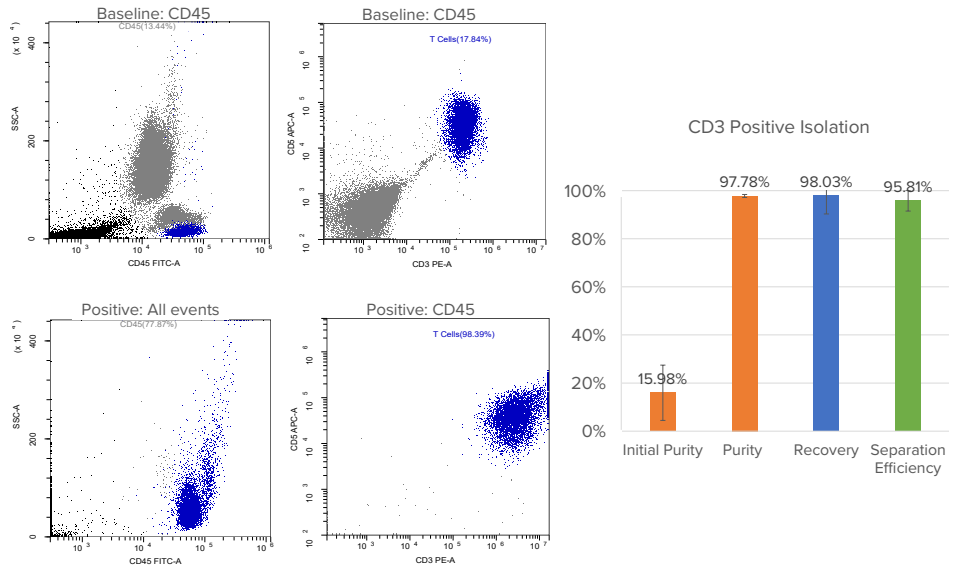
CREATING A CUSTOM MARS MAG LINE KIT IS EASY TOO

Our flexible MAG LINE allows you to select the PE-conjugated antibodies for labeling cell subpopulation you want to purify and use them together with our universal MARS Anti-PE Magnetic Nanobeads. If you need a large quantity of MARS MAG LINE reagents, contact your sales rep for special discounted pricing.

REAGENT	CAT. NO.	
MARS Anti-PE Magnetic Nanobeads	R_M001A	
MARS anti-human PE-conjugated CD14 Antibody	R_M002A	learn more
MARS anti-human PE-conjugated CD3 Antibody	R_M003A	learn more
MARS anti-human PE-conjugated CD8 Antibody	R_M004A	learn more
MARS anti-human PE-conjugated CD19 Antibody	R_M005A	learn more
MARS anti-human PE-conjugated CD34 Antibody	R_M006A	learn more
MARS anti-human PE-conjugated CD45 Antibody	R_M007A	learn more
MARS anti-human PE-conjugated CD138 Antibody	R_M008A	learn more

Anti-human PE-conjugated CD3 Antibody

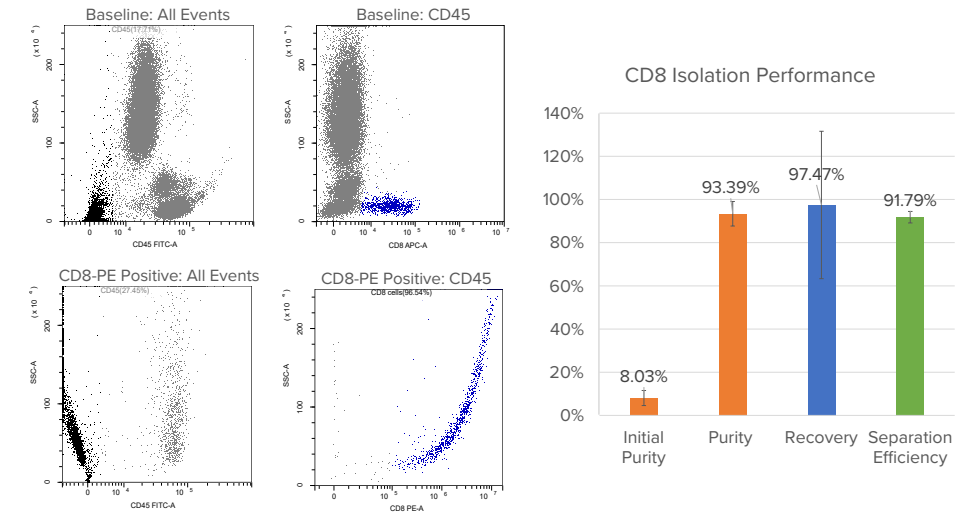
CAT NO: R_M003A



Cell isolation using MARS MAG LINE ADD-ADD-RUN: CD3+ cell isolation with MARS Anti-PE Magnetic Nanobeads from Whole Blood with No Lyse, No Wash Magnetic Selection yielded over 97% purity and over 98% recovery.

Anti-human PE-conjugated CD8 Antibody

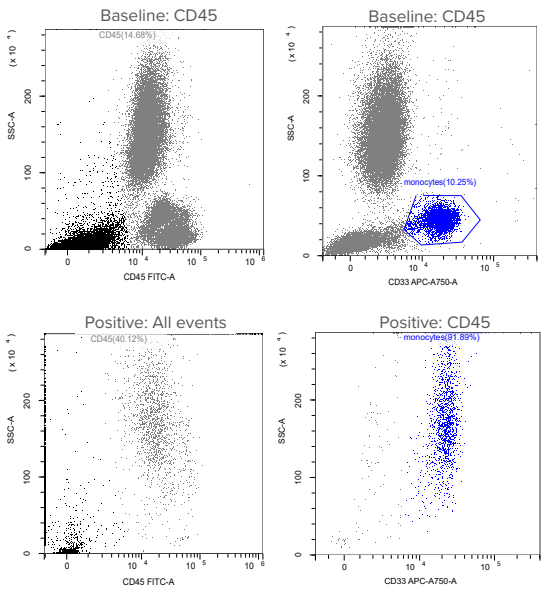
CAT NO: R_M004A

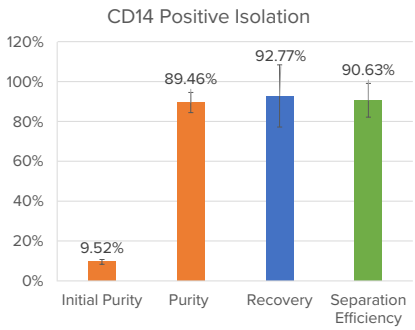


Cell isolation using MARS MAG LINE ADD-ADD-RUN: CD8+ cell isolation with MARS Anti-PE Magnetic Nanobeads from Whole Blood with No Lyse, No Wash Magnetic Selection yielded over 93% purity and over 97% recovery.

Anti-human PE-conjugated CD14 Antibody

CAT NO: R_M002A

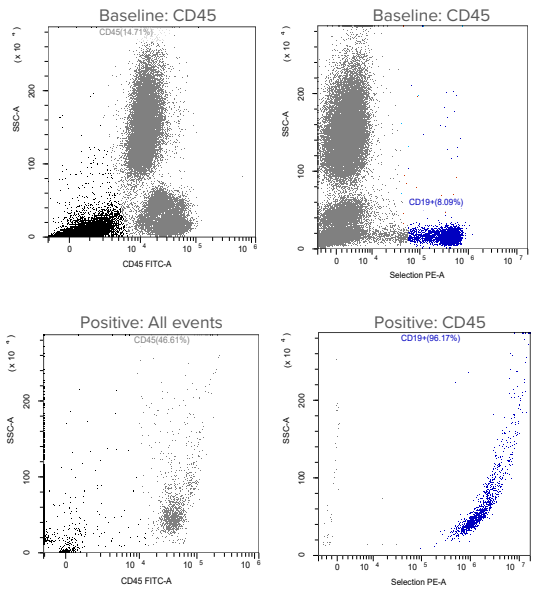


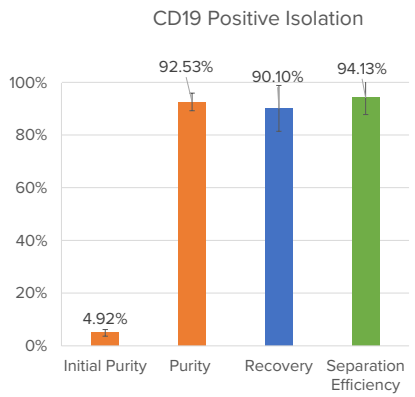


Cell isolation using MARS MAG LINE ADD-ADD-RUN:
CD14+ cell isolation with MARS Anti-PE Magnetic Nanobeads from Whole Blood with No Lyse, No Wash Magnetic Selection yielded over 89% purity and over 92% recovery of monocytes.

Anti-human PE-conjugated CD19 Antibody

CAT NO: R_M005A

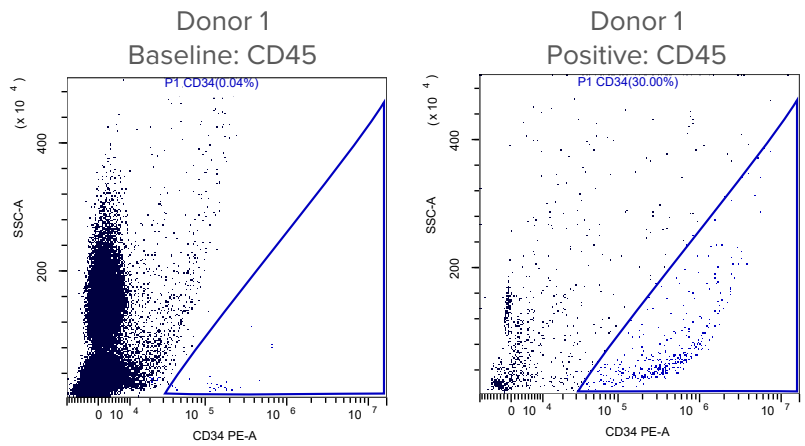




Cell isolation using MARS MAG LINE ADD-ADD-RUN:
CD19+ cell isolation with MARS Anti-PE Magnetic Nanobeads from Whole Blood with No Lyse, No Wash Magnetic Selection yielded over 92% purity and over 90% recovery of CD19+ cells.

Anti-human PE-conjugated CD34 Antibody

CAT NO: R_M006A

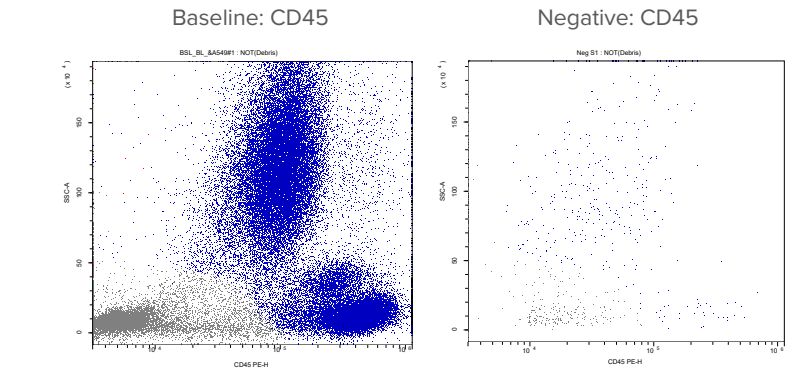


	BASELINE	PURITY
Donor 1	0.04%	30.00%
Donor 2	0.01%	27.12%
Donor 3	0.04%	19.77%
Donor 4	0.02%	31.00%
Donor 5	0.02%	12.84%

Cell isolation using MARS MAG LINE ADD-ADD-RUN yielded high CD34+ Cell Enrichment across multiple Peripheral Blood Samples with as high as 1500-fold enrichment.

Anti-human PE-conjugated CD45 Antibody

CAT NO: R_M007A

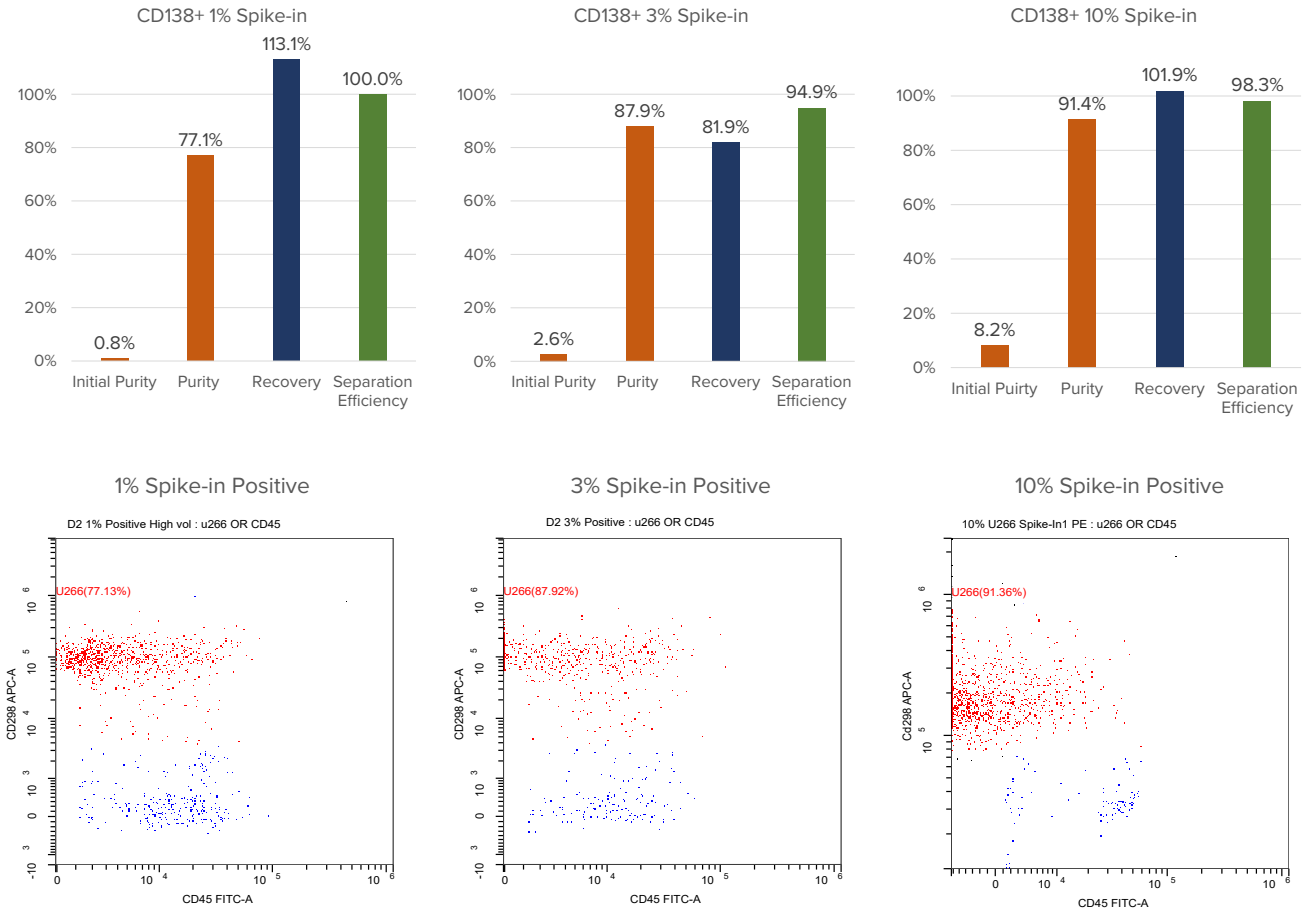


	TARGET DEPLETION
Donor 1	97.95%
Donor 2	97.81%
Donor 3	99.33%
Donor 4	99.26%

Cell isolation using MARS MAG LINE negative selection: CD45+ cells were depleted from human blood using CD45 PE-conjugated antibody and MARS anti-PE Magnetic Nanobeads complex. CD45+ cells were depleted on average by 99%.

Anti-human PE-conjugated CD138 Antibody

CAT NO: R_M008A



Cell isolation using MARS MAG LINE ADD-ADD-RUN CD138+ U266 cells were prestained with CD298-APC prior to spike-in to whole blood. Cells were isolated from Whole Blood using CD138 PE-conjugated antibody and MARS anti-PE Magnetic Nanobeads. CD138+ cells are enriched from 1% to up to 77% (1% spike-in), from 3% to up to 88% (3% spike-in) and from 8% to up to 91% (10% spike-in).

For research use only. Not for use in therapeutic or diagnostic procedures.

AC_B002A

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