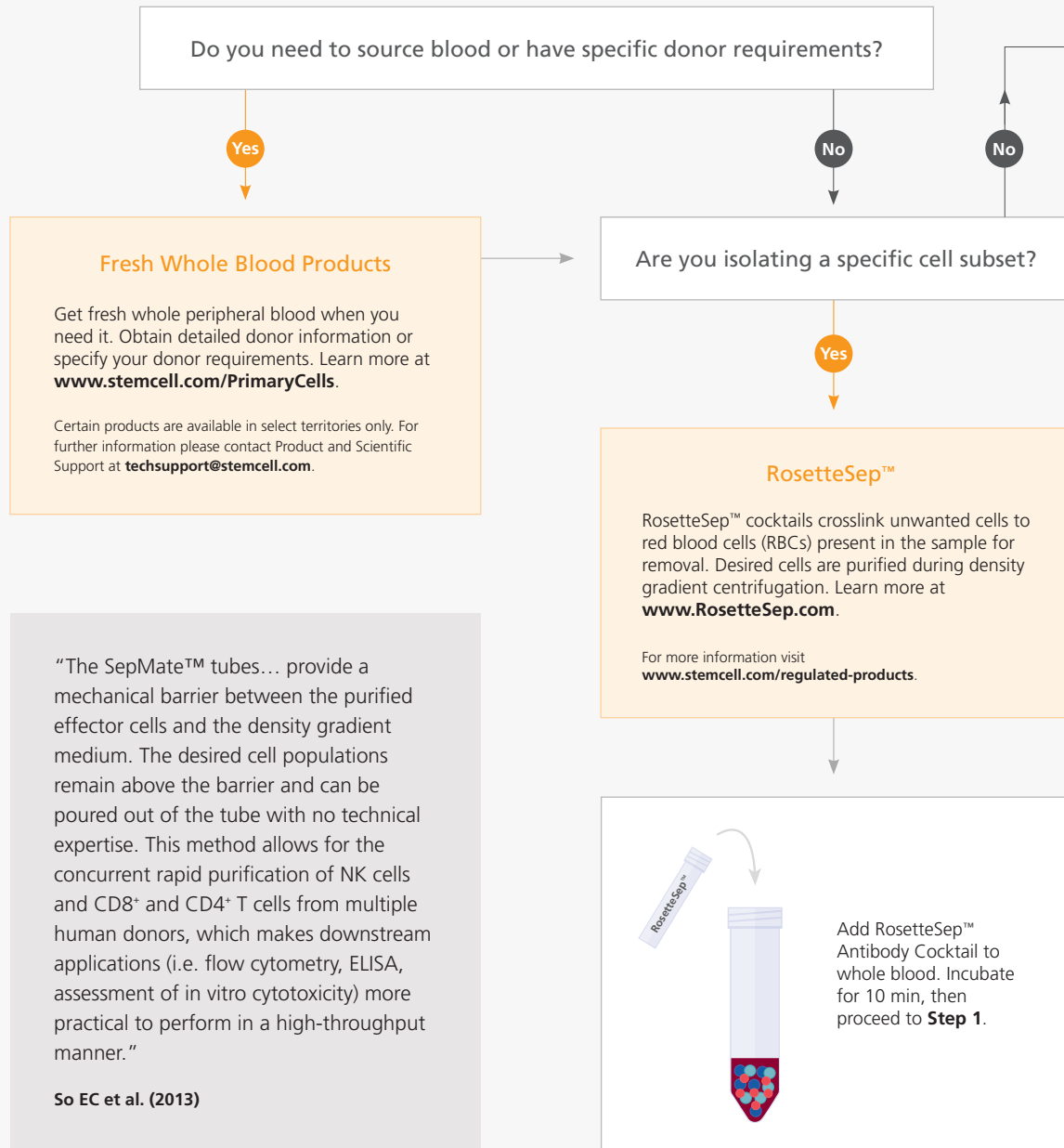


Simplify and Speed Up Cell Isolation from Whole Blood

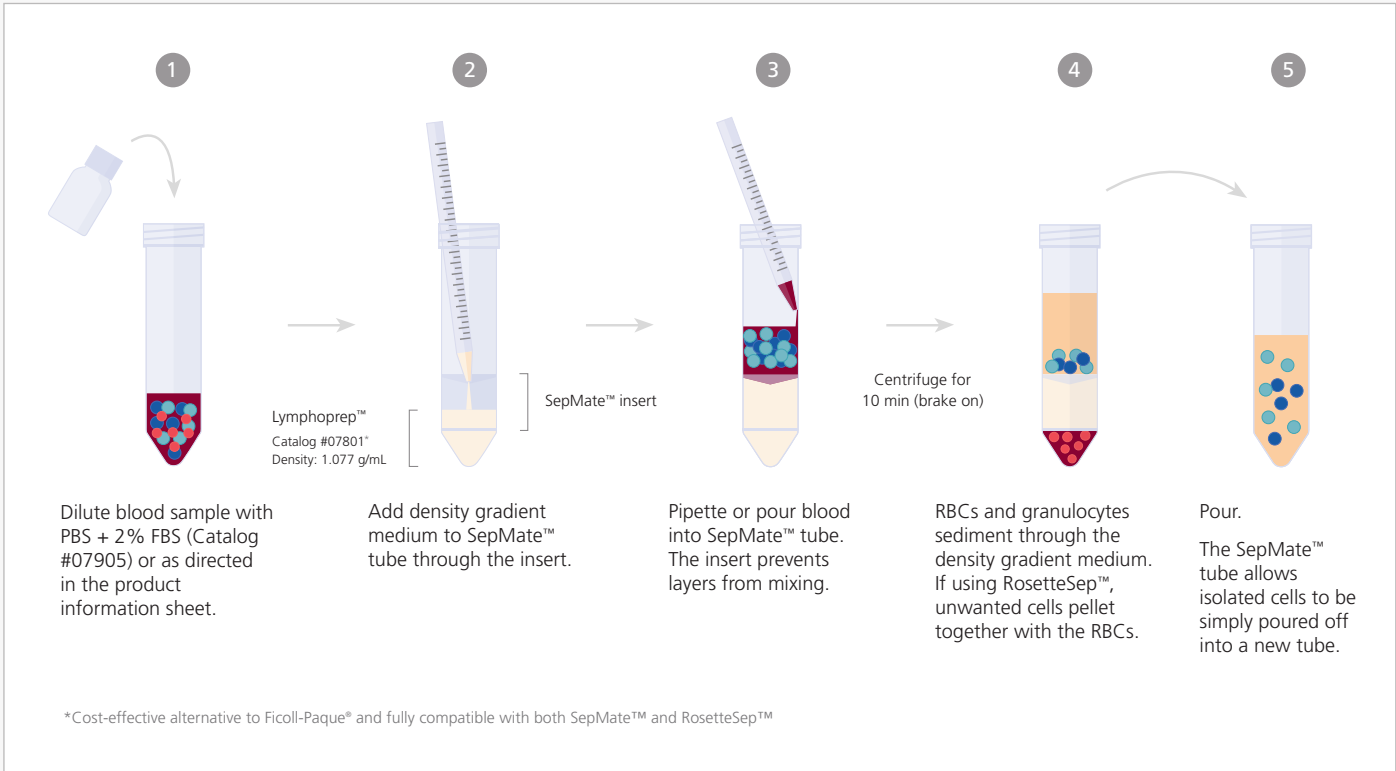


“The SepMate™ tubes... provide a mechanical barrier between the purified effector cells and the density gradient medium. The desired cell populations remain above the barrier and can be poured out of the tube with no technical expertise. This method allows for the concurrent rapid purification of NK cells and CD8+ and CD4+ T cells from multiple human donors, which makes downstream applications (i.e. flow cytometry, ELISA, assessment of in vitro cytotoxicity) more practical to perform in a high-throughput manner.”

So EC et al. (2013)

*SepMate™ (IVD) is registered as an In Vitro Diagnostic (IVD) device in Canada, the United States, Europe, and Australia. Select RosetteSep™ products carry the CE mark and are suitable for IVD applications in countries where the CE marking is recognized. For a full list of n Vitro Diagnostic (IVD) Medical Device registered products and their availability in certain countries visit www.stemcell.com/regulated-products.

SepMate™
Hassle-Free PBMC Isolation in Just 15 Minutes



What downstream applications are you using your cells for?

Cell Subset Isolation
Use EasySep™ to further isolate cell subsets from PBMCs.
www.EasySep.com

Analysis by Flow Cytometry
Analyze cells with antibodies compatible with our cell culture and isolation reagents.
www.stemcell.com/Antibodies

Cell Culture
Culture isolated immune cells with specialized media and supplements.
www.ImmunoCult.com

Cryopreservation
Cryopreserve cells using cGMP-manufactured, animal component-free cryopreservation medium.
www.stemcell.com/Cryopreservation

IVD Applications
Use MNCs isolated with SepMate™ for your downstream IVD applications.

SepMate™ Applications

Isolation of Specific Cell Subsets from Whole Blood in 25 Minutes

Immune cell isolation plays an important role in areas such as drug discovery and development, vaccine research, and translational immunology. The movement towards more physiologically relevant assays based on primary human cells has created the need for a fast and efficient method of isolating immune cells from large numbers of whole blood samples. To facilitate this type of high-throughput cell processing, SepMate™ can be combined with RosetteSep™ for rapid and efficient cell isolation directly from whole blood in as little as 25 minutes (see page 2). No columns or magnets are necessary, and minimal training is required.

At the University of Maryland School of Medicine, Dr. Ajay Jain and colleagues routinely isolate Natural Killer (NK) cells from large numbers of human samples. Jain's lab adopted the RosetteSep™ and SepMate™ cell isolation system in place of their previous method: density gradient centrifugation followed by column-based immunomagnetic isolation. Dr. Jain's group found that NK cells isolated using RosetteSep™ and SepMate™ have similar expression profiles and cytotoxicity to cells isolated using their previous method but cells were obtain in less than half of the time.¹

PBMC Isolation from Non-Human Blood Samples

SepMate™ has been used to isolate PBMCs from non-human samples for research applications, including the following species:

- Non-human primate^{2,3}
- Pig⁴
- Dog⁵
- Horse⁶
- Goat⁷
- And more ...

The isolation of PBMCs from non-human blood samples using SepMate™ is for research use only and may require modifications from what is specified in the product information sheet. Please contact our Product and Scientific Support team at techsupport@stemcell.com for details.

Product Listing

TUBE	CATALOG #	BLOOD VOLUME PROCESSED (mL)	UNIT SIZE
SepMate™-15 (IVD) ^a	85415	0.5 - 5	100 tubes
SepMate™-50 (IVD) ^a	85450	4 - 17	
SepMate™-15 (IVD) ^a	85420	0.5 - 5	500 tubes
SepMate™-50 (IVD) ^a	85460	4 - 17	
SepMate™-15 (RUO) ^b	86415	0.5 - 5	100 tubes
SepMate™-50 (RUO) ^b	86450	4 - 17	
SepMate™-15 (RUO) ^b	86420	0.5 - 5	500 tubes
SepMate™-50 (RUO) ^b	86460	4 - 17	
DENSITY MEDIUM	CATALOG #	DENSITY	UNIT SIZE
Lymphoprep™	07851	1.077 g/mL ^c	500 mL

- SepMate™ (IVD) is available in Australia, Canada, Europe, and the United States of America, where it is registered as an In Vitro Diagnostic (IVD) device for the isolation of mononuclear cells from human whole blood, cord blood, and bone marrow by density gradient centrifugation. This product is also available in China where it is considered a non-medical device by the China Food and Drug Administration (CFDA), and should therefore be used as general laboratory equipment.
- SepMate™ (RUO) is intended for Research Use Only (RUO) and is available in regions where SepMate™ (IVD) is not available.
- Lymphoprep™ has the same density as Ficoll-Paque® and can be substituted for Ficoll-Paque® without any need to change your existing protocols. Lymphoprep™ is for Research Use Only (RUO).

References

- So EC, Sallin MA, Zhang X, Chan SL, Sahni L et al. (2013) A high throughput method for enrichment of natural killer cells and lymphocytes and assessment of in vitro cytotoxicity. *J Immunol Methods* 394(1–2): 40–8.
- Yacoob C, Lange MD, Cohen K, Lathia K, Feng J et al. (2018) B cell clonal lineage alterations upon recombinant HIV-1 envelope immunization of rhesus macaques. *PLoS Pathog* 14(6): e1007120.
- Termini JM, Magnani DM, Maxwell HS, Lauer W, Castro I et al. (2017) Simian T Lymphotropic Virus 1 Infection of *Papio anubis*: tax Sequence Heterogeneity and T Cell Recognition. *J Virol* 91(20).
- Dhakal S, Goodman J, Bondra K, Lakshmanappa YS, Hiremath J et al. (2017) Polyamide nanovaccine against swine influenza virus in pigs. *Vaccine* 35(8): 1124–31.
- Gibbons N, Goulart MR, Chang Y-M, Efstathiou K, Purcell R et al. (2017) Phenotypic heterogeneity of peripheral monocytes in healthy dogs. *Vet Immunol Immunopathol* 190: 26–30.
- Korovina DG, Yurov KP, Alexeenkova S V, Savchenkova EA & Savchenkova IP. (2017) Characterization of multipotent mesenchymal stem cells isolated from equine umbilical cord blood. *Russ Agric Sci* 43(3): 262–5.
- Baliu-Piqué M, Verheij MW, Drylewicz J, Ravesloot L, de Boer RJ et al. (2018) Short Lifespans of Memory T-cells in Bone Marrow, Blood, and Lymph Nodes Suggest That T-cell Memory Is Maintained by Continuous Self-Renewal of Recirculating Cells. *Front Immunol* 9: 2054.

Copyright © 2019 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, Scientists Helping Scientists, ImmunoCult, RosetteSep, SepMate, and EasySep are trademarks of STEMCELL Technologies Inc. Ficoll-Paque® is a trademark of GE Healthcare Ltd. Lymphoprep is a trademark of Alere Technologies AS. All other trademarks are the property of their respective holders.

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.