NEST®

Peripheral Blood Lymphocyte Separation Tube

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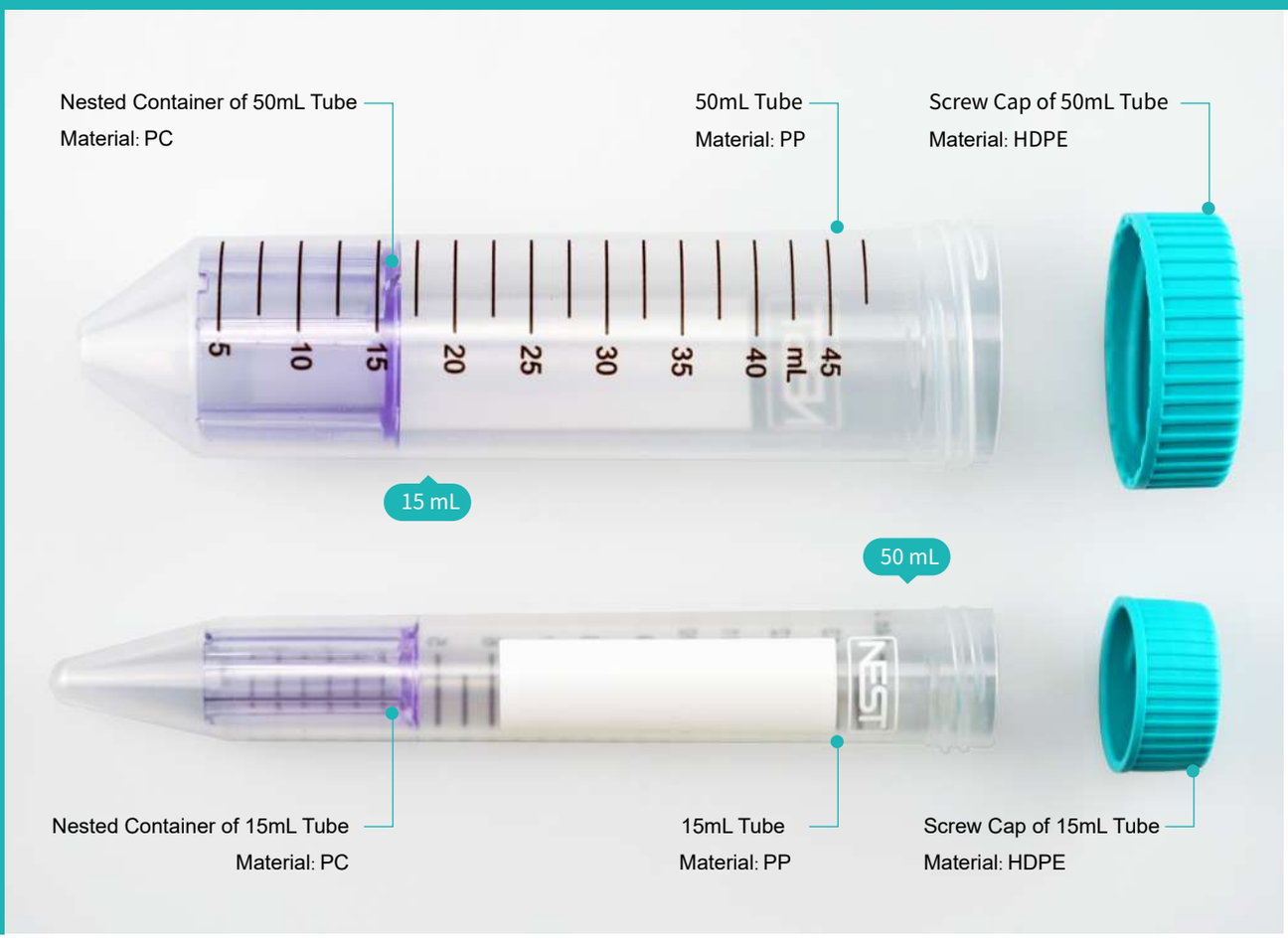

Product Overview

This product separates and purifies cells with separation solution by means of density gradient centrifugation according to the difference in cell density. With the density gradients generated inside, the target cells can be retained on top of the nested container in the tub, which is designed specifically to separate the target sample from the density gradient medium to the utmost extent; while erythrocytes and granulocytes will sink at the bottom after centrifugation, and the PBMC (Peripheral Blood Mononuclear Cell, including lymphocytes and monocytes, etc.) will float on the surface. Only the simple operation of decanting is involved in the final stage, and no other professionally technical operations required.

Features

- Rapid separation and purification for PBMC within only 15 min.
- Simple operation procedures: no need to slowly and laboriously add samples into the solution; when collecting samples, simply decant the centrifuge tube. No other professionally technical operations are required.
- Good reproducibility for reduced errors and less operation variation among users.
- E-beam sterilized with SAL=10^{6}
- No heat source; no nucleases

Product Information

Cat.NO.	Name	Description	Recommended Volume of Sample	Specifications	Packaging
601852	Peripheral Blood Lymphocyte Separation Tube	Sterilized	4-9 mL	15 mL	50/pack, 500/case
602858	Peripheral Blood Lymphocyte Separation Tube	Sterilized	13-30 mL	50 mL	25/pack, 500/case

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Usages and Application Directions

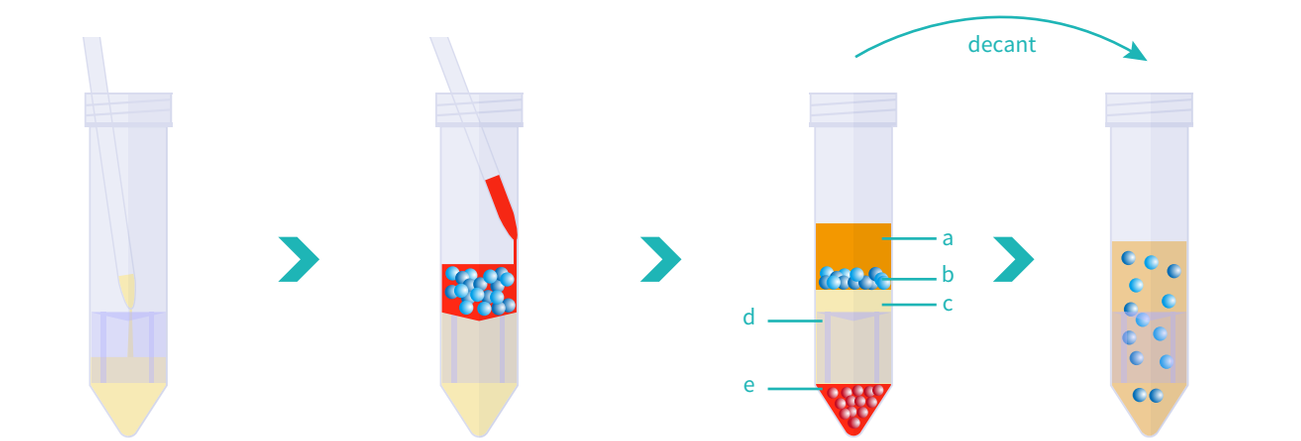
Peripheral Blood Lymphocyte Separation Tube is mainly applied to separate Peripheral Blood Mononuclear Cell (lymphocytes and monocytes) from whole blood or bone marrow through density gradient centrifugation. For research use only.

Instructions

Preliminary Preparation

- Cool off the separation solution away from light to the room temperature (RT) .
- Add the separation solution by a serological pipette through the central hole of the nested container: for a 15 mL tube, add approximately 4 mL separation solution; for a 50 mL tube, add approximately 13 mL separation solution; Please ensure the separation solution on top of the nested container throughout the procedure.
- Add the drawn anticoagulated blood and bone marrow into the separation tube cooled off to the room temperature. Besides, adding saline to dilute the specimen is not requisite but can help improve the separation result.

Separation



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- Slowly pour or pipette the anticoagulated sample (blood or bone marrow, diluted with saline if needed) along the tube wall into the tube slowly: for a 15 mL separation tube, 4-9 mL of the sample is recommended; for a 50 mL separation tube, 13-30 mL of the sample is recommended.
- Centrifuge at room temperature with a centrifugal force of 1200 x g for 10 minutes, then turn off the centrifuge. For samples left for more than 24h, longer centrifugation time is recommended.
- Liquid separation condition after centrifugation (from top to bottom): A. plasma; B. enriched cell fractions (intermediate phase contains lymphocytes/PBMCs cells); C. separation solution; D. nested container; E. precipitation (erythrocytes and granulocytes). Collect or directly discard the plasma layer of 5-10 mm above the enriched cells to prevent the enriched cells from re-contamination by platelets.
- Collect the enriched cells (lymphocytes/PBMCs cells) and pour the supernatant from the separation tube into another clean centrifuge tube, during which the nested container works to prevent the enriched cells from re-contamination by erythrocytes and granulocytes. Don't invert the separation tube for more than 2s.
- Wash the enriched cells (lymphocytes/PBMCs cells) with Phosphate Buffer Solution(PBS) then centrifuge them at 250 xg for 10 min.
- Repeat the washing 2 times as in step 5 and finally re-suspend cells with 5 mL PBS.

Precautions

- This product should be operated by professionally trained personnel under the guidance of good laboratory practices.
- Do not re-use the separation tube.
- Specific separation effects may vary due to the difference in centrifuges' performance from different brands and the difference in regional temperature and environment. Users may adjust the speed and time of centrifugation to find out the best separation conditions (up to respective laboratory).
- The product is applicable to the sample of human peripheral blood, bone marrow and umbilical cord blood, but not to leukocyte isolation samples, samples with brownish yellow layer of erythrocyte sedimentation nor samples over 48 hours.
- After centrifugation, cells may aggregate on the tube wall above the enriched layer, which is a normal phenomenon influenced by the quality, sample placement time and anticoagulant type of sample, but independent of the use of the separation tube. Cells can be removed by scraping the interior wall with a pipette tip.
- When specimens of any biological origin are involved, operate the blood taking needles, blood collection tubes and related instruments, etc. cautiously in accordance with strict protocols. Do treat specimens as hidden dangerous sources of infectious diseases such as HIV, HBV, HCV, etc, in which case disposable gloves are necessary in order to avoid the risk of infection during operation.