Human Lymphocyte Separation Kit

Cat#: 7125121

[Product Name]
Human Lymphocyte Separation Kit

[Product Description]
Human Lymphocyte Separation Kit consists of Human Lymphocyte Separation Medium and Cell Separation Tubes. Cell Separation Tubes are GMP-grade tubes made of medical-grade materials with stable chemical properties, no cell toxicity, and tissue toxicity.
This product utilizes density gradient sedimentation to purify cells based on differences in cell density. By using the separation medium and centrifugation, cell separation and purification are achieved. The density gradient separation medium creates a certain level of density gradient, and anticoagulant whole blood is poured into the separation tube. After centrifugation, red blood cells and granulocytes settle at the bottom of the tube, while PBMCs (mononuclear cells, including lymphocytes and monocytes) float on the surface of the separation medium, with a small number of cells suspended in the medium. Aspirating the cells from the surface of the separation medium allows the separation of lymphocytes from peripheral blood.
This product offers advantages such as quick and easy use, no cell toxicity, high cell yield, and good cell viability.

[Model & Specification]

Product Name	Cat No.	Size	Component Name	Component Size	Quantity
Human Lymphocyte Separation Kit	7125121	60 tests/kit	Human Lymphocyte Separation Medium	250 mL/bottle	1000 mL (4 bottles)
			Cell Separation Tubes	50 mL×15 pcs/box	60 pcs (4 boxes)
			Centrifuge Rack		1 piece

[Storage Conditions and Validity Period]
Kept unopened away from light at 2℃~30℃, valid for 2 years.

[Directions for Use]
1. Fill the separation medium: Unpack the cell separation tubes in a clean bench, place each tube on the centrifuge rack, and fill each cell separation tube with 15~15.5 mL of human lymphocyte separation medium (as shown in Figure1 A). Tighten the cap of the separation tube.
2. Centrifuge: Centrifuge at 20°C, 1000 g, for 1 min.
3. Inspection: Check if the separation medium has completely centrifuged to the bottom of the sieve plate (as shown in Figure1 B). Ensure that the separation medium fills the space at the bottom of the sieve plate. If not, add more separation medium and repeat the centrifugation.
4. Pour in the blood: The blood sample must be anticoagulant whole blood, undiluted, and 15~25 mL of whole blood can be separated (as shown in Figure1 C).
5. Centrifuge: Centrifuge at 20°C, 800 g, for 15 min. Set a slow acceleration and deceleration (if there are ten gears and the tenth gear is the highest, the acceleration and deceleration should be adjusted to the third gear).
6. Aspirate the PBMC cell layer: As shown in Figure1 D, the PBMC layer is below the plasma and above the separation medium.

7. Wash with RPMI-1640 1~2 times (20°C, 250 g, 10 min). Resuspend lymphocytes in 0.9% (W/V) physiological saline or suitable culture medium for further use.

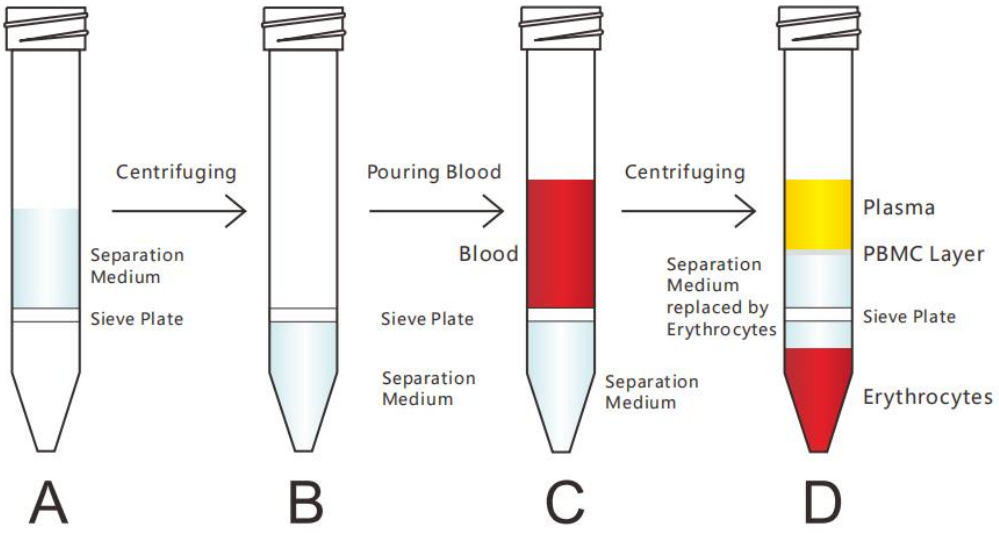

Figure 1. Blood separation using a human lymphocyte separation kit

[Applicable Instrument]

Horizontal rotor centrifuge.

[Sample Requirements]

The sample must be fresh anticoagulant blood which shall be collected by sterile operation and shall not be frozen or refrigerated in the processes of storage, handling and transportation.

[Explanation of Test Results]

Different performance of centrifuges of various brands and differences in temperature environments may have influence on the separation effect, so users can adjust the centrifugation revolution and the centrifugation time to find the best separation conditions (The specific separation conditions are determined by laboratories).

[Limitation of Test Methods]

The effect of this product is affected by such factors as storage conditions, operator experience and sample quality.

[Notes]

1. One bottle of human lymphocyte separation medium corresponds to one box of cell separation tube. It is recommended to fill one bottle of separation medium at one time. If the packaging of the separation tube is opened but not filled in time, please pay attention to check whether the tube cover is tightened to avoid contamination.
2. After the cell separation tube is filled with separation medium and centrifuged, if it is not used temporarily, it should be tightened the lid, placed on the centrifuge tube holder, kept upright (do not lie down or inverted), stored at room temperature and protected from light, and used within 3 months.
3. The optimal separation temperature is (20±5)℃, and the separation effect will be affected beyond this temperature range.
4. Blood was collected at room temperature, stored at room temperature in an anticoagulant container (storage time should not exceed 2 hours), separated at room temperature, and not placed in a 4℃ refrigerator.
5. Whole blood can be separated directly without dilution. However, the dilution did not affect the separation effect.
6. No less than 15 mL peripheral anticoagulated whole blood for a 50 mL separation tube. If the

whole blood is insufficient, it is recommended not to use the separation tube, and dilution of the whole blood will not improve the separation effect.

7. To isolate PBMC, blood cells from which plasma was removed could be poured into separation tubes either directly or first diluted twice with normal saline. But only if there are enough red blood cells. For 50 mL separation tubes, there were at least 15 mL of erythrocytes equivalent to the amount of whole blood.

[Description of Product Symbol]

Product Symbol	Description	Product Symbol	Description
REF	Catalogue Number	LOT	Product Batch Code
	Date of Manufacture		Manufacturer
	Expiration Date		Temperature Limit
	Consult instructions for use		Store away from light

[Instruction Revision Date]

2024.03.22

[Company Information]

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