V02

Ficoll Plus 1.077

Cat:P4350
Size: 200 mL
Storage: This product is sensitive to light, should avoid light storage at room temperature, shelf life of 2 years. After sterile opening, save at room temperature.

Product Description

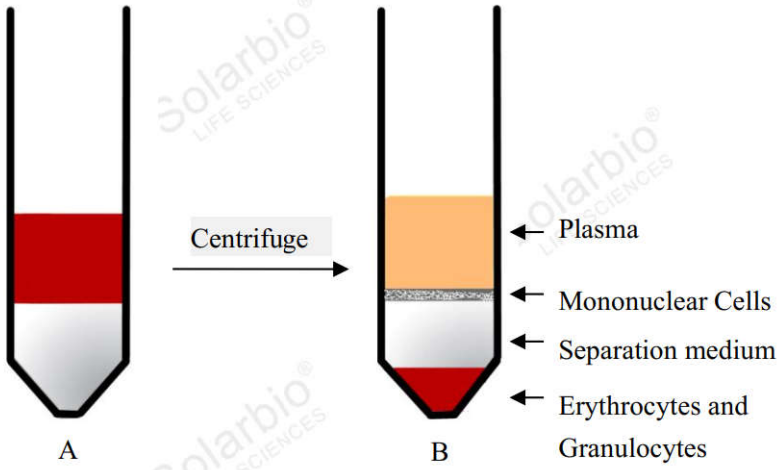
Ficoll Plus 1.077 is a sterile, ready-to-use solution for density gradient centrifugation. The medium consists of a mixture of Ficoll 400 and sodium diatrizoate, adjusted to a density of 1.077g/ml. This medium facilitates rapid recovery of mononuclear cells from human blood.

Specifications

- Density: 1.090 + 0.001g/ml
- Osmolality: 290~350mOsm/kg H_2O
- Sterile liquid: Product has been 0.1μm filtered

Protocols(*only for reference*)

1、 Collect blood in a tube containing anticoagulant (EDTA or heparin) or use defibrinated blood. Dilute the blood with an equal volume of Dilution buffer or phosphate buffered saline solution.
2、 Add at least 3ml of the Ficoll Plus 1.077 to the centrifuge tube (If the diluted blood is greater than 3mL, an equal volume of the Ficoll Plus 1.077 is needed). Carefully layer the diluted blood over the Ficoll Plus 1.077 (Using a Pasteur pipette, carefully layer the diluted blood over the medium, with as little mixing as possible at the interface).
3、 Since the medium is of greater density than the cell suspension, a distinct interface will be formed (Figure A).
4、 At room temperature, centrifuge for 20~30 minutes at 500~1000g.
5、 After centrifugation, there will be well-defined mononuclear cells at the interface. The top layer is plasma; in the middle of the tube is transparent Ficoll Plus 1.077; erythrocytes and granulocytes should pellet to the bottom of the centrifuge tube (Figure B).
6、 Using a 1ml pipette tip or a Pasteur pipette, carefully remove the cells from the opaque interface and transfer to a new 15ml centrifuge tube. Wash the cells by adding 10ml of phosphate buffered saline solution or appropriate cell culture medium, centrifuge at 250g for 10 minutes.
7、 Discard the supernatant, respended cell pellet with 5ml of phosphate buffered saline solution or appropriate cell culture medium, centrifuge at 250g for 10minutes.
8、 Repeat step7, discard supernatant and resuspend cell pellet in medium.



Note

A. Mix it upside down before opening. This separation solution is a sterile product. In order to prolong the storage time of the separation solution, please unseal it under sterile conditions to avoid microbial contamination.
B. The separation solution should always be kept at room temperature (18℃~25℃) when used. If the indoor temperature is low, the separation solution can be preheated. Centrifugation at 4℃ or lower temperature may cause the white film layer to be unclear.

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C. Blood samples should preferably be fresh anticoagulated (within 2h of blood collection). In order to maintain the activity of neutrophils, freezing and cold storage should be avoided.
D. Dilute blood or wash cells, do not use buffer and culture medium containing Ca, Mg ions, its formation will lead to blood cell agglutination, greatly reduce the cell yield and purity.
E. Due to the electrostatic interaction of some plastic products (such as polystyrene), it may cause the cell to hang on the wall, affecting the separation effect.
F. The viscosity or temperature difference of blood samples may affect the separation effect, so the number of centrifugation and centrifugation time can be adjusted to find the best separation condition.
G. If the separated cells are to be further cultured, pay attention to maintain aseptic operation throughout the process to avoid microbial contamination.
H.Excessive suction of cell layers and separation fluid layers can result in the removal of granulocytes at the interface between the separation fluid and the suction cup, thereby increasing the number of contaminated granulocytes. Excessive suction of plasma layers may result in contamination of granulocytes with plasma proteins and platelets.
I. The cell dispersion coefficient and cell charge of different animal blood in different specific gravity separation solution are different, which should be mentioned when the user formulates the separation solution.The specific gravity of the required separation solution, the species of animal and the name of the cells to be separated should be provided.

Related products

YA0902 Disposable Pasteurized Straw
R1018 Cell Wash Solution
R1017 Whole Blood and Tissue Diluent
S9020 Superior Fetal Bovine Serum
T1300 Trypsin-EDTA Digest (0.25%) Contains no Phenol Red
A Variety of Other Animal and Other Cell Separations and Kits

Note: For more literature on the use of this product, please refer to Solarbio's official website.