



## Blood Cell Cryopreservation Solution (1x)

**Catalog Number: ST03006**

**Size: 50 ml**

Blood Cell Cryopreservation Solution is a ready-to-use and chemically defined serum-free solution which is intended for freezing human blood cells, as well as other kinds of blood cells for long-term storage.

### Product Description

Stemmera™ Blood Cryopreservation Solution is designed as an alternative to serum involved freezing solution for long-term storage of human blood and other blood cells in liquid nitrogen.

### Product Component

Component	Size	Storage	Cat #
Blood Cell Cryopreservation Solution	50 ml	-20°C	ST03006

### Storage and Handling

Stemmera™ Blood Cell Cryopreservation Solution is shipped with dry ice. The solution should remain stable at 2-8°C for 2 weeks, while at -20°C for at least 6 months upon opening. Making aliquot of solution is strongly recommended upon arrival.

### Application

Freeze blood cells.

### Product Use

This product is intended for *in vitro* use and research use only. Not intended for human or animal diagnostic or therapeutic uses.

### General Precautions

- Clean working space with 70% ethanol or other suitable disinfectant.
- Clinical samples should be treated as hazardous biological samples.
- Use aerosol barrier tips. Change tips after each use. Material Safety Data Sheet (MSDS) is available online.

### Protocol

#### Isolation of Peripheral Blood Mononuclear Cells (PBMCs)

- Received blood sample from clinic in capped EDTA tubes.
- Spray capped tubes with 70% Ethanol in biosafety hood.
- Spray CPT tubes with 70% Ethanol and place them in the hood.
- Invert the blood collection tubes 10 times to mix the sample (DO NOT SHAKE).
- Remove the cap from the CPT tubes. For each blood collection tube, remove the cap and pour into a CPT tube.
- Add 2 ml sterile room temperature (RT) PBS (calcium and magnesium free) to the blood collection tube.
- Cap and invert the blood collection tube to rinse. Then, pour the rinsate into CPT tube and cap the CPT tube.
- Repeat for each blood collection tube.
- Centrifuge CPT tubes at 1500 g for 30 minutes at room temperature.
- Spray the CPT tubes with 70% Ethanol and return them to the hood.
- Using a P1000 pipet, collect the buffy layer from each CPT tube (Hold the tube at a 45 degree angle and place the pipet tip directly above the buffy layer). The entire layer should be collected in 2 ml.
- Transfer the buffy layer from each CPT tube to 15 ml Falcon tube.
- Wash the cells with filling sterile PBS (calcium and magnesium free) into each tube. Invert the tubes to mix the samples.
- Centrifuge the Falcon tubes at 300 g for 25 minutes at room temperature.
- Spray CPT tubes with 70% Ethanol and return them to the hood.
- Aspirate as much supernatant as possible without disturbing the pellets in each tube.
- Resuspend the pellet in Blood Cell Cryopreservation Solution (Stemmera, Cat# ST03006) by gently pipetting up and down. The volume of Blood Cell Cryopreservation Solution can be adjusted by a range of  $1 \times 10^6$ - $4 \times 10^6$  cells per ml.
- Transfer 1 ml of the cell suspension to the cryovials and label the name of the cells.
- Place the cryovials in a freezing box and place in -80°C overnight.
- After 24 hours, transfer the cryovials to liquid nitrogen for long term storage.

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### Warranty and Limited Liability

Stemmera™ will not be liable for any damage caused by misuse, improper handling and storage of the product, non-compliance with precautions and procedures, and damages caused by events occurring after the product is released.

### Technical Support

For more product and technical information, please visit our website at [www.stemmera.com](http://www.stemmera.com).

For further assistance, email your inquiries to our Technical Support team at [techsupport@stemmera.com](mailto:techsupport@stemmera.com).

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### Related Products

Product	Cat #	Size
Alkaline Phosphatase Detection Kit (Ready-to-Use) - Blue	ST01001	50 tests
Alkaline Phosphatase Detection Kit (Ready-to-Use) - Red	ST01002	50 tests
Human Fibroblast (hFIB) Reprogramming Kit	ST01003	5 reactions
Cell Karyotyping Analysis Kit	ST01004	20 reactions
Human Blood Cell (hBLD) Reprogramming Kit	ST01005	5 reactions
Human ESCs/iPSCs Serum-/Feeder-free Medium (hStemSFM)	ST02001	500 ml
Human ESCs/iPSCs Xeno-Free Medium (hStemXFM)	ST02002	500 ml
Human Fibroblast (hFIB) Reprogramming Medium	ST02003	500 ml
Human Blood Cell (hBLD) Reprogramming Medium	ST02004	500 ml
Fibroblast Growth Medium	ST02005	500 ml
Human Blood Cell (hBLD) Growth Medium	ST02006	2 x 25 ml
Non-Enzymatic Cell Dissociation Solution (1x)	ST03001	100 ml
Serum-Free Cryopreservation Solution for Human ESCs/iPSCs	ST03002	50 ml
0.2% Gelatin	ST03003	100 ml
0.1% Gelatin	ST03004	100 ml
Universal Cryopreservation Solution (1x)	ST03005	50 ml