Human cord blood (CB) cells are promising sources of hematopoietic stem cells and tissue stem cells. CB cells have been used in clinics as hematopoietic stem cell sources for transplantation in patients with leukemia and other hematologic diseases. In addition, CB cells are now widely used in medical and biological research, including regenerative medicine, drug development, immunology, infection, genetics, environmental medicine, and induced pluripotent stem (iPS) cell establishment.

The National BioResource Project (NBRP) “Project Name: Research Cord Blood Bank [RCBB] project” was established to provide human CB cells for research use. RCBB collects, processes, and cryopreserves CBs that are not appropriate for clinical use, and provides the processed CB cells to domestic and overseas researchers for medical development purposes.

The research CBs are collected with written consent, but deemed to be no longer useful for clinical use in collection facilities. They are then transferred to the processing facility, IMSUT-Cell Resource Center. At this center, CB cells are processed, cryopreserved, and transferred to RIKEN BioResource Center (BRC). Through the RIKEN BRC, research CB cells shall be provided to the researchers in need.

Please see the official homepage in detail.

**Implementation system**

- Collection, processing, and cryopreservation of research CBs for research
  **IMSUT-Cell Resource Center, Research Hospital, The Institute of Medical Science, The University of Tokyo**

- Collection, cryopreservation, and release of the frozen CBs
  **RIKEN BioResource Center**

**National BioResource Project (NBRP)**

Japan Agency for Medical Research and Development (AMED)

Department of Research Infrastructure

http://www.nbrp.jp/

Research Cord Blood Bank Project

Core Institute:
The Institute of Medical Science, University of Tokyo

For more information, see the RCBB web site in RIKEN BRC Homepage

**RIKEN BioResource Center**

http://cell.brc.riken.jp/hcb
How to get research cord blood?

**Researchers (Research Institutes)**
Companies can apply to use.

1. Approval by intramural ethical review board (IRB)
2. Submit request form
3. Attach the approval proof of IRB
4. Invoice Request
5. Shipping frozen CB cells

**RIKEN BioResource Center (RIKEN BRC)**

**RCBB, IMSUT-Cell Resource Center**
(The Institute of Medical Science, The University of Tokyo)

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**Nucleated cells (HCB)**

Method: HES sedimentation
Container: plastic bag
Nucleated cell numbers: > 3×10⁸/bag
Fee: 32,900 yen/ (for nonprofit institutes)
65,800 yen/ (for profit institutes)
※Frozen CB bag in metal canister.

Method: Ficoll sedimentation/
neutrophil < 20% at freezing
Small volume
Container: Cryopreservation tubes
MNC numbers: > 1×10⁷/tube
Fee: 13,400 yen/set of four (for non-profit institutes)
26,800 yen/set of four (for profit institutes)

Large volume
Container: plastic bags (Same form HCB)
MNC numbers: > 1×10⁸/bag
Fee: 13,400 yen/ (for non-profit institutes)
65,800 yen/ (for profit institutes)

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**Mononuclear cells (MNC) by CB by Ficoll isolation (CBF)**

Method: immunomagnetic beads isolation
Container: Cryopreservation tubes
MNC numbers: > 1×10⁵/tube
Fee: 43,200 yen/ (for nonprofit institutes)
86,400 yen/ (for profit institutes)

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**CD34positive cells (C34)**

Method: immunomagnetic beads isolation
Container: Cryopreservation tubes
MNC numbers: > 1×10⁵/tube
Fee: 43,200 yen/ (for nonprofit institutes)
86,400 yen/ (for profit institutes)

※Frozen RCB cells are negative for infections (HBs-Ag, HBe-Ab, HCV-Ab, HIV-I/II-Ab, HTLV-I/Ab, Syphilis, (TPHA), and bacterial/fungal sterility tests are done).

※You may be charged at cost for processing, cryopreservation, and shipping. Please refer the price for each product. Of note, the fee might be changed

※If you have any questions, do not hesitate to ask us.