

KREAvital Myeloid Cell Medium

Cat. No. KBI-90031 (100 ml)
Store at: -20°C

Product Description

KREAvital Myeloid Cell Medium is designed for culturing both lymphocytes and bone marrow cells originating from myeloid cells. It is a conditioned medium providing a higher mitotic index and superior chromosome morphology.

Cytogenetic analysis of human hematopoietic cells using bone marrow aspirates is a standard practice in hematology. Fresh cells or cells grown in short-term cultures often yield an insufficient number of mitotic cells and repeated aspirations are required. KREAvital Myeloid Cell Medium was developed to stimulate the proliferation of human hematopoietic cells from bone marrow as well as peripheral blood. KREAvital Myeloid Cell Medium is based on MEM-Alpha basal medium supplemented with L-Glutamine, fetal bovine serum, antibiotics (penicillin and streptomycin) and conditioned medium.

KREAvital Myeloid Cell Medium is supplied as frozen medium, which is ready for use after thawing.

Precaution and Disclaimer

1. For in vitro diagnostic use. The medium is not intended for therapeutic use.
2. Do not use if a visible precipitate is observed in the medium.
3. Use of KREAvital Myeloid Cell Medium does not guarantee the successful outcome of any chromosome analysis testing.
4. Do not use KREAvital Myeloid Cell Medium beyond the expiration date indicated on the product label.

Storage and Stability

KREAvital Myeloid Cell Medium should be kept frozen at -20°C. After thawing, the medium should be stored at 2 - 8°C. The medium should be used within 10 days after thawing. Protect the medium from light.

Instructions for Use

Thaw KREAvital Myeloid Cell Medium at refrigerator temperatures (2 - 8°C) or at room temperature. Mix gently after thawing. Note that the medium already contains L-Glutamine.

Culture of Bone Marrow and Peripheral Blood Cells for Chromosome Analysis

The myeloid cell karyotyping method was developed to provide information about chromosomal abnormalities. In the presence of a conditioned medium, acute and chronic nonlymphocytic leukemic cells in bone marrow and peripheral blood cultures are stimulated to enter into mitosis by DNA replication. After 48-72 hours, a mitotic inhibitor is added to the culture to stop mitosis in the metaphase stage. After treatment by hypotonic solution, fixation and staining, chromosomes can be microscopically observed and evaluated for abnormalities.

Procedure

1. Inoculate approximately 0.5 ml of bone marrow suspension or $0.5-1 \times 10^7$ Ficoll-separated peripheral blood cells into a plastic tube or tissue culture plate with 10 ml of medium. Invert tubes gently to mix specimen.
2. Incubate the culture at 37°C in 5% CO₂ atmosphere for 72 - 120 hours.
3. Add 0.1-0.2 ml of Colcemid Solution (KBI-90051) to each culture tube. Incubate the culture for an additional 15 - 30 minutes. Proceed with regular fixation protocol. For specific protocol please enquire.

Quality Control

KREAvital Myeloid Cell Medium is tested for sterility, pH, osmolality and endotoxin concentrations. In addition, each batch is tested for leukemic cell growth.

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**Kreatech
Biotechnology B.V.**
Vlierweg 20
1032 LG Amsterdam
The Netherlands