Ficoll-Paque™ PLUS

Ficoll-Paque PLUS is a sterile, ready-to-use aqueous medium for density gradient centrifugation. The medium consists of a mixture of Ficoll™ PM400 and sodium diatrizoate at a density of 1.077 g/ml. Ficoll-Paque PLUS is QC-tested to ensure low levels of endotoxins. The medium was developed for large- or small-scale purification of mononuclear cells from human peripheral blood, using a simple and rapid centrifugation technique developed by Boyum (1, 2). Protocols for purifying mononuclear cells from sources other than human peripheral blood have also been developed (3–6).

Ficoll-Paque PLUS offers:

- Low levels of endotoxin.
- Complete QC package to assure reliability.
- Reliable isolation of lymphocytes with representative proportions of T and B cells.
- Greater than 90% lymphocyte viability.
- Rapid isolation with a recovery of 60% ±20% of the lymphocytes present in the original blood sample.
- Sterile aqueous medium.
- Stable for at least 3 yr under appropriate storage conditions.

Ficoll-Paque PLUS is a recognized standard in laboratories worldwide for the isolation of mononuclear cells for analytical research studies.

Applications

Ficoll-Paque PLUS is optimized for the isolation of mononuclear cells from human peripheral blood. However, the medium can be adapted for the isolation of human lymphocytes from other sources, including abdominal, amniotic, and pleural fluids (3–6), as well as bone marrow (7, 8). Separation of normal human peripheral blood by the recommended protocol typically yields a lymphocyte preparation with:

- 60% ±20% recovery of the lymphocytes present in the original blood sample.
- 95% ±5% mononuclear cells.
- > 90% viability of the separated cells.
- 3% ±2% granulocytes.
- 5% ±2% red blood cells.
- < 0.5% of the total platelets of the original blood sample.

The density of Ficoll-Paque PLUS (1.077 g/ml) is optimized for the isolation of mononuclear cells from human blood. If a density other than 1.077 g/ml is required for optimal separation, GE Healthcare offers density gradient media of densities 1.073 g/ml (Ficoll-Paque PREMIUM 1.073), and 1.084 g/ml (Ficoll-Paque PREMIUM 1.084). An alternative is to use Percoll™ or Percoll PLUS, which are ideal for density gradient centrifugation when other densities are preferred. Iso-osmotic gradients in the density range of 1.0 to 1.3 g/ml are possible with Percoll products, allowing improved yield and purity. Furthermore, Ficoll-Paque PLUS and Percoll products have been used in combination to isolate defined subpopulations of blood cells.
Specifications
Density 1.077 + 0.001 g/ml
Stability Stable for 3 yr if stored between 4ºC and 30ºC and protected from direct light.
Endotoxins Contains < 0.12 EU/ml.

References

Ordering information

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<th>Product</th>
<th>Pack size</th>
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<td>17-1440-02</td>
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<td>6 × 500 ml</td>
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Related products

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Percoll PLUS is protected by the following patents and equivalent patents and patent applications in other countries, which are licensed to GE Healthcare from Dendreon Corporation: US patent number 4,927,749, US patent number 4,927,750, Canadian patent number 1,338,492, Japanese patent number 2,628,509, US patent number 5,789,750, US patent number 6,015,843 and European patent number 1,047,635. A free, non-transferable license to use this product for density gradient separation purposes under the above mentioned patent rights accompanies the purchase of the product from a GE Healthcare company and its licensed distributors, but any use of Percoll PLUS or any other organosilanolized colloidal silica particle-based separation media to enrich, purge or isolate cells for active immunotherapy for oncology applications shall be excluded from such license.
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First published 2005
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