FAST, EASY, GENTLE!

pluriBead®
Application example
Clinical studies

pluriSelect
USA
Spring Valley, CA 91977
USA
Phone: +1-619-928-9265
support.usa@pluriselect.com
sales.usa@pluriselect.com

pluriSelect
Worldwide
Kreuzstrasse 5
04103 Leipzig
Germany
Phone: +49 341 33385810
support@pluriselect.com
sales@pluriselect.com

www.pluriselect.com

V 1.0
Clinical studies with pluriBead®

Introduction
pluriBead® allows for positive non-magnetic cell isolation from any sample material. The procedure is simple: Sieve the pluriBead® with bound target cells down a strainer; pluriBead® with your target cells stays on top, while the unwanted cells run through. After detaching, target cells are ready.

pluriBead® and clinical studies
When performing clinical studies or trials, sample material from your patients is rare. The ability to separate more than one cell type from the same complex sample enables a new variety of analysis for studies in clinical trials and clinical research.

Current methods for blood analysis are serviceable for immediate stabilization of the blood (PAXGene®), but analysis of single cell populations (magnetic cell sorting) is time and manpower consuming. A lot of important sample material is wasted.

Their shortcomings are numerous, but pluriBead® helps to overcome these deficits.

<table>
<thead>
<tr>
<th>Current methods</th>
<th>pluriBead®</th>
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<tbody>
<tr>
<td>Limitation of possible targets</td>
<td>All types of targets, including proteins, viruses and microorganisms</td>
</tr>
<tr>
<td>Cost-intensive equipment, time-consuming procedure, high number of laboratory staff</td>
<td>No extra tools (except a mixer and a centrifuge), fast procedure, minimal staff requirement</td>
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<tr>
<td>PAXGene® and Tempus™ Blood RNA</td>
<td>Simple cell isolation within 10 - 30 minutes</td>
</tr>
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<td>Very fast, but only for global analysis</td>
<td>Flow-through can be used for further isolation steps</td>
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<tr>
<td>Cells cannot be sorted after stabilization</td>
<td>Works with samples from 0.2 - 45 ml</td>
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<tr>
<td>Small sample volume (2 ml whole blood per tube)</td>
<td>Different targets from one sample via differently sized catcher particles and strainers</td>
</tr>
<tr>
<td>Magnetic cell separation</td>
<td>Direct application in whole blood and other biological sera</td>
</tr>
</tbody>
</table>

Key feature: Multi-target cell isolation with pluriBead®
Find both methods on the right.

pluriBead® Cascade
Simultaneous isolation for two different targets
pluriBead® Cascade allows for the isolation of two cell types at the same time. Just combine S-pluriBead® and M-pluriBead®. Due to their different bead sizes, it is possible to incubate both at the same time and separate afterwards through different mesh sizes.

You need an S-pluriBead® Kit and a compatible M-pluriBead® Kit.

Cell separation scheme:

Application examples:
CD4⁺, CD8⁺ (helper T cell, cytotoxic T cell)
CD3⁺, CD19⁺ (T cell, B cell)
CD14⁺, CD15⁺ (monocyte, granulocyte)

pluriBead® Step by Step
Sequential isolation for up to six different targets
pluriBead® Step by Step involves chain cell isolation with pluriBead® kits of various antibodies. This allows for the isolation of up to six different cell types from the same sample.

Cell separation scheme:

Application examples:
CD3⁺, CD14⁺, CD15⁺, CD19⁺ (T cell, monocyte, granulocyte, B cell)
CD3⁺, CD9⁺, CD15⁺, CD235a⁺ (T cell, platelet, granulocyte, RBC)
CD4⁺, CD8⁺, CD19⁺ (helper T cell, cytotoxic T cell, B cell)