

*FAST, EASY, GENTLE!*

# pluriBead®

Application Example

**Clinical studies**



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 **pluriSelect**

# 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.

### Current methods

Limitation of possible targets (no proteins, viruses or microorganisms)

Cost-intensive equipment, time-consuming procedure, high number of laboratory staff

### PAXGene® and Tempus™ Blood RNA

Very fast, but only for global analysis

Cells cannot be sorted after stabilization

Small sample volume (2 ml whole blood per tube)

### Magnetic cell separation

Only for one cell population  
No separation of different cell types

Sample preparation needed

### pluriBead®

All types of targets, including proteins, viruses and microorganisms

No extra tools (except a mixer and a centrifuge), fast procedure, minimal staff requirement

Simple cell isolation within 10 - 30 minutes

Flow-through can be used for further isolation steps

Works with samples from 0.2 - 45 ml

Different targets from one sample via differently sized catcher particles and strainers

Direct application in whole blood and other biological sera

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

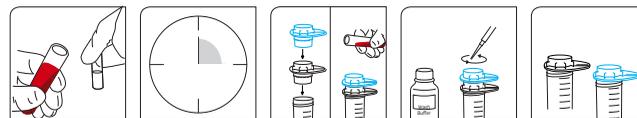
## pluriBead® Cascade

### 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:



Labeling    Incubation    Isolation    Washing    Processing\*

\*After isolation and washing, both target cell types can be used for stabilization, lysis or detachment.

### Application examples:

CD4<sup>+</sup>, CD8<sup>+</sup> (helper T cell, cytotoxic T cell)

CD3<sup>+</sup>, CD19<sup>+</sup> (T cell, B cell)

CD14<sup>+</sup>, CD15<sup>+</sup> (monocyte, granulocyte)

## pluriBead® Step by Step

### Sequential isolation for up to six different targets

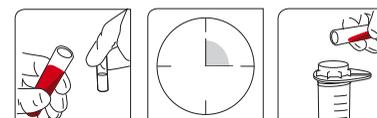
pluriBead® Step by Step involves chain cell isolation with pluriBead® kits of various antibodies. This allows for the isolation of up to six different cell types from the same sample.

### Cell separation scheme:



Labeling    Incubation    Isolation    Washing    Detachment

After each sieving step (isolation), you can already start to label the remaining sample for isolating a different cell type



Labeling    Incubation    Isolation

### Application examples:

CD3<sup>+</sup>, CD14<sup>+</sup>, CD15<sup>+</sup>, CD19<sup>+</sup> (T cell, monocyte, granulocyte, B cell)

CD3<sup>+</sup>, CD9<sup>+</sup>, CD15<sup>+</sup>, CD235a<sup>+</sup> (T cell, platelet, granulocyte, RBC)

CD4<sup>+</sup>, CD8<sup>+</sup>, CD19<sup>+</sup> (helper T cell, cytotoxic T cell, B cell)