

## Selection Guide for pluriBead® Cell Separation

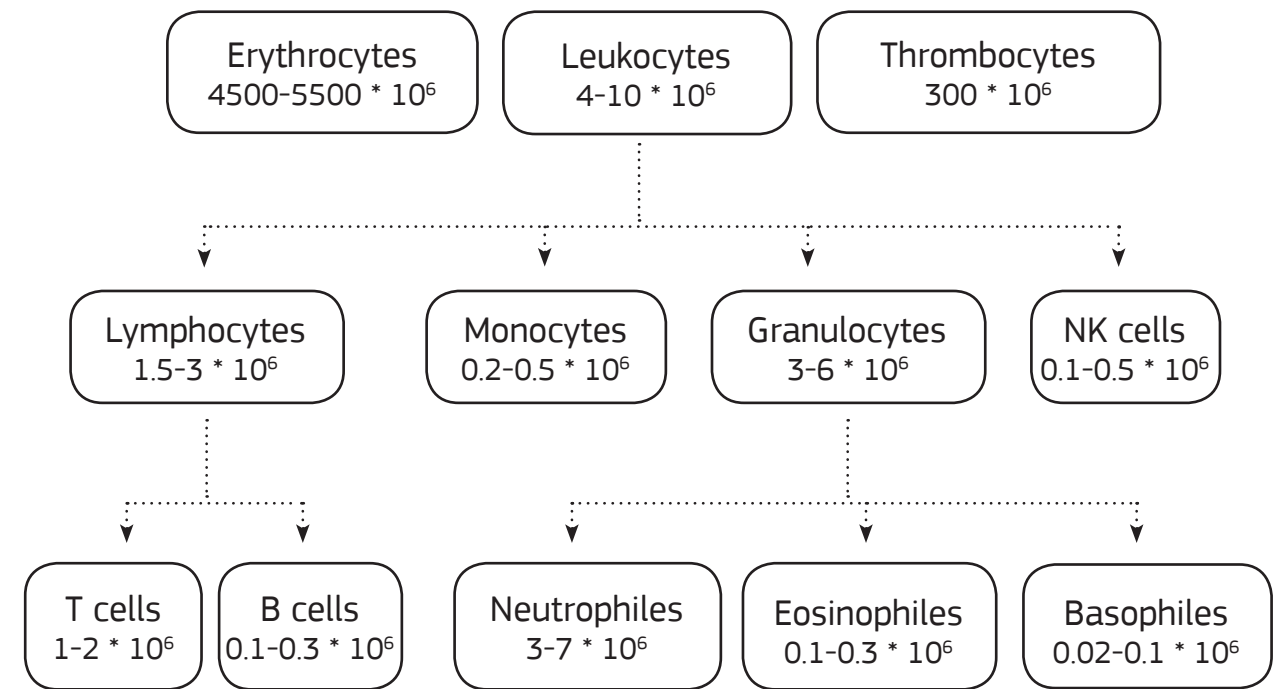
pluriBead® is available in two different sizes: S-pluriBead® (4 mL) or M-pluriBead® (10 mL).  
Each is differently suitable depending on sample material and CD marker.

This guide shall help you to determine the amount of target cells by volume of beads.

|           | CD     | Whole Blood                     |  | Buffy Coat                      |  | PBMC / Cell Culture             |  |                                 |  |   |  |  |  |
|-----------|--------|---------------------------------|--|---------------------------------|--|---------------------------------|--|---------------------------------|--|---|--|--|--|
|           |        | S-pluriBead®                    |  | M-pluriBead®                    |  | S-pluriBead®                    |  | M-pluriBead®                    |  | S-pluriBead®  |  | M-pluriBead®   |  |
|           |        | Volume of beads per 1 mL sample | Amount of target cells (*10 <sup>6</sup> ) | Volume of beads per 1 mL sample | Amount of target cells (*10 <sup>6</sup> ) | Volume of beads per 1 mL sample | Amount of target cells (*10 <sup>6</sup> ) | Volume of beads per 1 mL sample | Amount of target cells (*10 <sup>6</sup> ) | Volume of beads per 2*10 <sup>6</sup> target cells in mL sample | Amount of target cells (*10 <sup>6</sup> ) | Volume of beads per 5*10 <sup>6</sup> target cell in mL sample | Amount of target cells (*10 <sup>6</sup> ) |
| Human     | CD2    | 40 µL                           | 0.8  | 100 µL                          | 0.8  | 80 µL                           | 3  | 100 µL                          | 5  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD3    | 40 µL                           | 0.7  | 100 µL                          | 0.7  | 80 µL                           | 3  | 100 µL                          | 5  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD4    | 40 µL                           | 0.6  | 100 µL                          | 0.6  | 80 µL                           | 3  | 100 µL                          | 5  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD5    | 40 µL                           | 0.7  | 100 µL                          | 0.7  | 80 µL                           | 3  | 100 µL                          | 5  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD7    | 40 µL                           | 0.7  | 100 µL                          | 0.7  | 80 µL                           | 3  | 100 µL                          | 5  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD8    | 40 µL                           | 0.5  | 100 µL                          | 0.5  | 80 µL                           | 2  | 100 µL                          | 4  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD9    | 40 µL                           | **   | 100 µL                          | **   | 80 µL                           | **   | 100 µL                          | **   | 60 µL   | 1  | 100 µL   | 3  |
|           | CD11a  | 40 µL                           | 0.5  | 100 µL                          | 0.5  | 80 µL                           | 1.5  | 100 µL                          | 3.5  | 60 µL   | 1  | 100 µL   | 3  |
|           | CD11b  | 40 µL                           | 0.5  | 100 µL                          | 0.5  | 80 µL                           | 1.5  | 100 µL                          | 3.5  | 60 µL   | 1  | 100 µL   | 3  |
|           | CD14   | 40 µL                           | 0.4  | NR                              | NR   | 80 µL                           | 1.5  | 100 µL                          | 3.5  | 60 µL   | 1  | 100 µL   | 3  |
|           | CD15   | 60 µL                           | 1  | 100 µL                          | 2  | 100 µL                          | 2  | 100 µL                          | 3.5  | 60 µL   | 1  | 100 µL   | 3  |
|           | CD16   | 60 µL                           | 1  | 100 µL                          | 2  | 100 µL                          | 2  | 100 µL                          | 3.5  | 60 µL   | 1  | 100 µL   | 3  |
|           | CD19   | 20 µL                           | 0.1  | NR                              | NR   | 40 µL                           | 1  | 50 µL                           | 1.5  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD21   | 20 µL                           | 0.1  | NR                              | NR   | 40 µL                           | 1  | 50 µL                           | 1.5  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD31   | 40 µL                           | **   | 100 µL                          | **   | 40 µL                           | **   | 100 µL                          | **   | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD43   | 40 µL                           | 0.7  | 100 µL                          | 2  | 80 µL                           | 2  | 100 µL                          | 3.5  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD44   | 40 µL                           | 0.7  | 100 µL                          | 2  | 80 µL                           | 2  | 100 µL                          | 4  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD45   | 60 µL                           | 1  | 100 µL                          | 2  | 100 µL                          | 2  | 100 µL                          | 4  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD55   | 40 µL                           | 0.7  | 100 µL                          | 3  | 80 µL                           | 3  | 100 µL                          | 5  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD95   | 40 µL                           | *  | NR                              | NR   | 80 µL                           | *  | 100 µL                          | *  | 60 µL   | 1.5  | 100 µL   | 4  |
| CD117     | 40 µL  | *                               | NR   | NR                              | 40 µL                                      | *                               | NR   | NR                              | 60 µL                                      | 1.5   | 100 µL                                     | 4  |  |
| CD235a    | 120 µL | 9                               | 100 µL                                     | 9                               | 120 µL                                     | 9                               | 100 µL                                     | 9                               | NR   | NR  | NR   | NR   |  |
| CD271     | 40 µL  | *                               | NR   | NR                              | 40 µL                                      | *                               | NR   | NR                              | 60 µL                                      | 1.5   | 100 µL                                     | 4  |  |
| CD326     | 40 µL  | *                               | NR   | NR                              | 40 µL                                      | *                               | NR   | NR                              | 60 µL                                      | 1.5   | 100 µL                                     | 4  |  |
| Murine    | CD4    | 40 µL                           | 1  | 100 µL                          | 1.5  | N/A                             | N/A  | N/A                             | N/A  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD8    | 40 µL                           | 0.6  | 100 µL                          | 0.7  | N/A                             | N/A  | N/A                             | N/A  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD11b  | 40 µL                           | 0.7  | 100 µL                          | 0.7  | N/A                             | N/A  | N/A                             | N/A  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD11c  | 40 µL                           | 0.7  | 100 µL                          | 0.7  | N/A                             | N/A  | N/A                             | N/A  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD14   | 40 µL                           | 0.5  | 100 µL                          | 0.4  | N/A                             | N/A  | N/A                             | N/A  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | CD19   | 40 µL                           | 2  | 100 µL                          | 4  | N/A                             | N/A  | N/A                             | N/A  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | F4/80  | 40 µL                           | 0.5  | 100 µL                          | 0.5  | N/A                             | N/A  | N/A                             | N/A  | 60 µL   | 1.5  | 100 µL   | 4  |
| Universal | CD45   | 40 µL                           | 0.7  | 100 µL                          | 4  | N/A                             | N/A  | N/A                             | N/A  | 60 µL   | 1.5  | 100 µL   | 4  |
|           | Ly6G   | 40 µL                           | 0.7  | 100 µL                          | 1  | N/A                             | N/A  | N/A                             | N/A  | 60 µL   | 1.5  | 100 µL   | 4  |

\* rare cells strongly depend on the number of target cells in the sample  
\*\* cross reaction with platelets in this sample material!  
NR - not recommended / N/A - not available (sample material)

## Constituents of 1 mL human Whole Blood



## Available Key Markers

| T Cell   | Monocyte Macrophage    | Granulocyte                                 | Platelet                          | Stem Cell  |
|--|------------------------|---|-----------------------------------|--|
| CD3<br>CD4 (Helper T cell)<br>CD8 (Cytotoxic T cell) | CD14<br>F4/80 (Murine) | CD15<br>CD16 (Neutrophile)<br>Ly6G (Murine) | CD9 (Whole blood)<br>CD41<br>CD61 | CD117 (Hematopoietic progenitor cell)<br>CD271 (Mesenchymal stem/stromal cell) |
| B Cell   | Epithelial Cell        | Endothelial cell                            | Dendritic Cell                    | Erythrocyte  |
| CD19   | CD326                  | CD31  | CD11c<br>CD86                     | CD235a   |

Key markers are suggested for these specific cell types.



pluriBead® is a unique cell separation technology that works without any magnetic components. The procedure is simple:

You sieve your pluriBeads (beads bound to target cells) down a strainer - the pluriBeads with your target cells stay on top, the unwanted cells run through. After detaching, you have your target cells ready.