

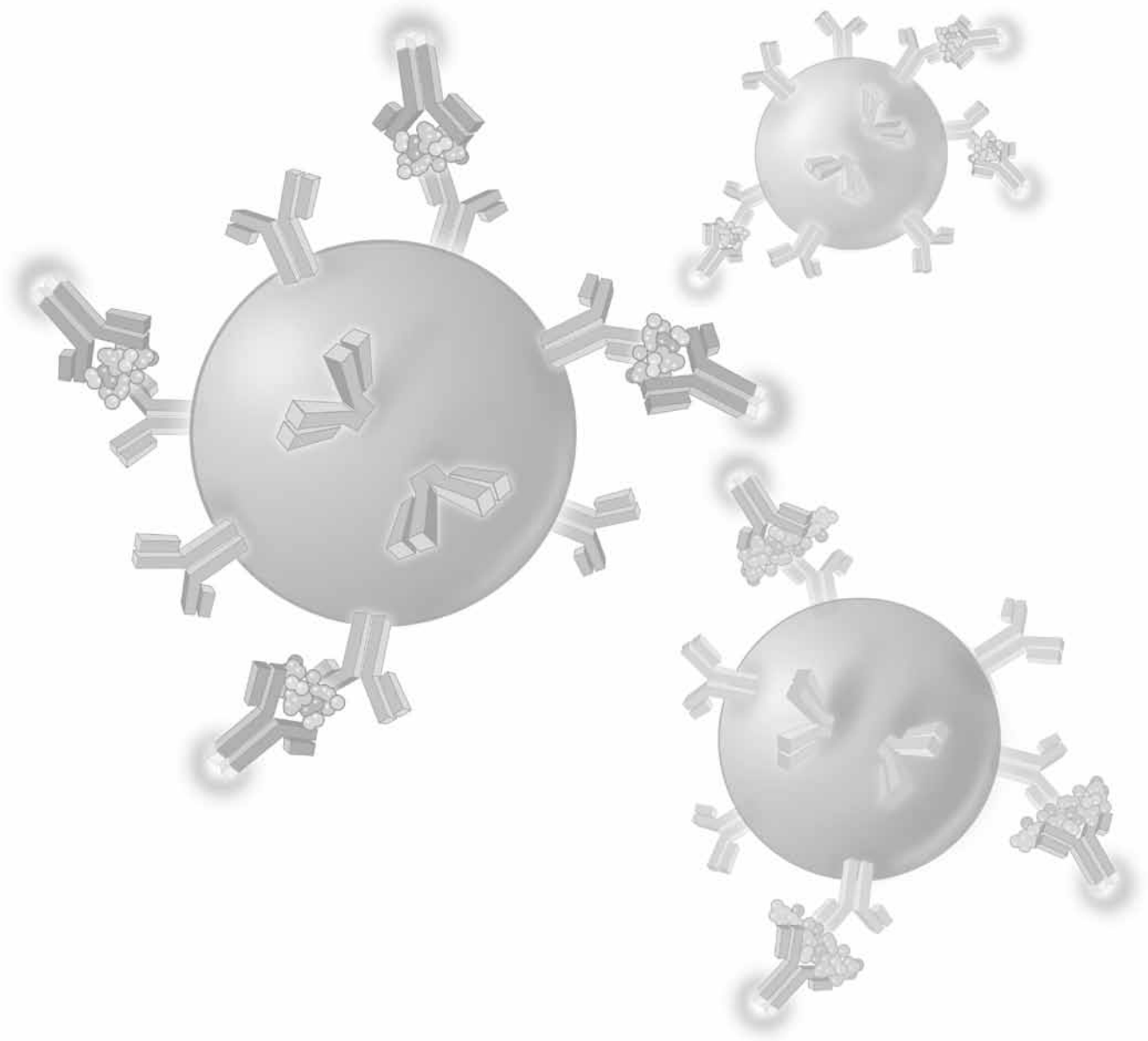
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BD Biosciences

# BD™ Cytometric Bead Array (CBA)

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## Product List



## Highlights of BD CBA Products

### Reagents with Superior Quality and Reproducibility

All BD CBA products are evaluated for performance characteristics including reproducibility, linearity, spike recovery, and theoretical limit of detection. These values are reported in the product documentation that is included with each BD CBA product.

#### Reproducibility

The intra-assay and inter-assay reproducibility are determined by evaluating ten replicates of three different sample levels (intra-assay) and three replicates of three different sample levels from four different experiments (inter-assay).

#### Linearity

Cell culture supernatant, serum, or EDTA-plasma is spiked with protein and serially diluted. The diluted samples are assayed and the results are compared with the values expected from each dilution.

#### Spike recovery

Cell culture supernatant, serum, or EDTA-plasma is spiked with three different levels of protein. The samples are assayed and the results are compared to the expected values to determine recovery.

#### Theoretical limit of detection

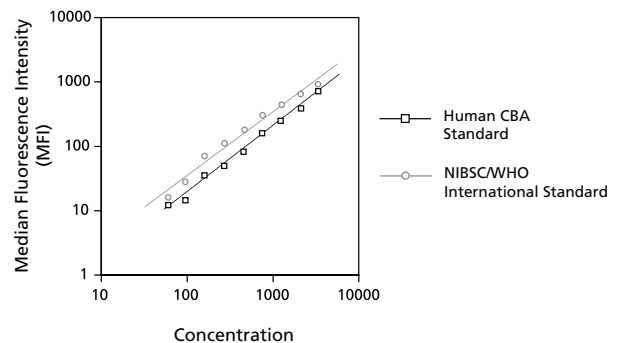
The individual standard curve range for a given cytokine defines the minimum and maximum quantifiable levels using a BD CBA assay. The theoretical limit of detection is defined as the corresponding concentration at two standard deviations above the median fluorescence of 30 replicates of the negative control (0 pg/mL) using a 4- or 5-parameter curve.

### Comparison of BD CBA Standards to the NIBSC/WHO International Standards

The NIBSC protein standards are recognized by the World Health Organization (WHO) as international biological standards. They meet established requirements for accuracy, consistency, and stability. The NIBSC/WHO standards are assigned potency values in International Units (IU) of biological activity and nominal mass (ie, not absolute mass values). Therefore they cannot be used to establish absolute concentrations for a cytokine preparation. However, these standards do provide a means to facilitate comparisons of cytokine concentration values determined by experiments conducted within different laboratories or methods.

The source of a recombinant protein (ie, insect cell, *E. coli*, etc) and the affinity of antibodies used can affect the measurement and performance of a protein in an immunoassay. The conversion factors provided in the subsequent tables make it possible to compare protein concentrations in samples measured by different immunoassays that have been standardized to the same NIBSC/WHO standards.

The conversion factor may change based on the batch of either standard. Therefore, the conversion factor is intended to be a guideline indicating whether a BD CBA assay over- or underestimates analyte concentrations relative to the NIBSC/WHO standards. Researchers are advised to incorporate both sets of standards in their assays if they wish to derive data from the NIBSC/WHO standards.



Titration curve comparing the BD CBA Human IFN- $\gamma$  recombinant standard to the NIBSC/WHO International Standard.

## Highlights of BD CBA Products *(continued)*

**Table 1. NIBSC conversion factor summary for BD CBA Flex Set Standards**

|                | NIBSC STANDARD |                   |                         | CALCULATED CONCENTRATION<br>USING BD CBA FLEX SET<br>(PG/ML) | NOMINAL NIBSC<br>CONCENTRATION<br>(PG/ML) | BD CBA FLEX SET:<br>NIBSC/WHO MASS<br>CONVERSION FACTOR |
|----------------|----------------|-------------------|-------------------------|--|---|---|
|                | CODE NO.       | MASS UNITS / VIAL | IU VALUE                |  |   |   |
| Human b-FGF    | 90-712         | 4 µg              | 1,600                   | 1,295.87 ±103.20   | 2,500                                     | 1.97  |
| Human G-CSF    | 88-502         | 100 ng            | 10,000                  | 1,231.33 ±87.71  | 2,500                                     | 2.06  |
| Human GM-CSF   | 88-646         | 1 µg              | 10,000                  | 1,551.45 ±70.33  | 2,500                                     | 1.62  |
| Human IFN-γ    | 87-586         | 12.5 ng           | 250                     | 1,287.44 ±174.12   | 2,500                                     | 1.97  |
| Human IL-1β    | 86-680         | 1 µg              | 100,000                 | 2,610.76 ±129.84   | 2,500                                     | 0.97  |
| Human IL-2     | 86-504         | 7.6 ng            | 100                     | 2,148.20 ±193.43   | 2,500                                     | 1.17  |
| Human IL-3     | 91-510         | 1 µg              | 1,700                   | 1,822.31 ±117.76   | 2,500                                     | 1.39  |
| Human IL-4     | 88-656         | 100 ng            | 1,000                   | 1,535.99 ±79.24  | 2,500                                     | 1.65  |
| Human IL-5     | 90-586         | 500 ng            | 5,000                   | 1,084.09 ±254.01   | 2,500                                     | 2.38  |
| Human IL-6     | 89-548         | 1 µg              | 100,000                 | 2,041.22 ±220.02   | 2,500                                     | 1.25  |
| Human IL-7     | 90-530         | 1 µg              | 100,000                 | 573.00 ±94.55  | 2,500                                     | 4.44  |
| Human IL-8     | 89-520         | 1 µg              | 1,000                   | 2,448.42 ±153.34   | 2,500                                     | 1.04  |
| Human IL-9     | 91-678         | 100 ng            | 1,000                   | 601.58 ±35.24  | 2,500                                     | 4.20  |
| Human IL-10    | 93-722         | 1 µg              | 5,000                   | 2,510.49 ±144.61   | 2,500                                     | 1.01  |
| Human IL-11    | 92-788         | 500 ng            | 5,000                   | 13,401.31 ±1,390.37  | 10,000                                    | 0.75  |
| Human IL-12p70 | 95-544         | 1 µg              | 10,000                  | 1,307.09 ±71.6   | 2,500                                     | 1.93  |
| Human IL-13    | 95-622         | 1 µg              | 1,000                   | 2,723.24 ±660.88   | 2,500                                     | 0.93  |
| Human MCP-1    | 92-794         | 5 µg              | 5,000 arbitrary units   | 2,280.63 ±150.6  | 2,500                                     | 1.10  |
| Human MIP-1α   | 92-518         | 2 µg              | 200 arbitrary units     | 1,242.93 ±40.98  | 2,500                                     | 2.04  |
| Human OSM      | 93-564         | 1 µg              | 25,000                  | 531.11 ±34.17  | 2,500                                     | 4.75  |
| Human RANTES   | 92-520         | 10 µg             | 100,000 arbitrary units | 1,589.05 ±181.79   | 2,500                                     | 1.60  |
| Human TNF      | 88-786         | 1 µg              | 46,500                  | 1,642.65 ±99.14  | 2,500                                     | 1.54  |
| Human TNFR1    | 96-528         | 10 µg             | not provided            | 12,214.45 ±1,165.96  | 10,000                                    | 0.83  |
| Human TNFR2    | 93-524         | 10 µg             | not provided            | 707.95 ±46.45  | 2,500                                     | 3.57  |
| Human VEGF     | 02-286         | 13 µg             | 13,000                  | 1,250.615 ±72.77   | 2,500                                     | 2.03  |
| Mouse GM-CSF   | 91-658         | 1 µg              | 100,000 arbitrary units | 1,748.55 ±132.95   | 2,500                                     | 1.46  |
| Mouse IL-1β    | 93-668         | 100 ng            | 100,000 arbitrary units | 4,531.11 ±393.89   | 2,500                                     | 0.56  |
| Mouse IL-2     | 93-566         | 100 ng            | 10,000 arbitrary units  | 368.74 ±41.31  | 2,500                                     | 6.92  |
| Mouse IL-3     | 91-662         | 1 µg              | 100,000 arbitrary units | 1,309.44 ±77.95  | 2,500                                     | 1.93  |
| Mouse IL-4     | 91-656         | 1 µg              | 10,000 arbitrary units  | 439.64 ±43.03  | 2,500                                     | 5.76  |
| Mouse IL-6     | 93-730         | 100 ng            | 10,000 arbitrary units  | 221.70 ±49.24  | 2,500                                     | 11.40   |
| Mouse TNF      | 88-532         | 1 µg              | 200,000 arbitrary units | 1,540.95 ±191.70   | 2,500                                     | 1.67  |

## Highlights of BD CBA Products *(continued)*

**Table 2. NIBSC conversion factor summary for BD CBA Kit Standards**

|                     | NIBSC STANDARD |                   |                         | CALCULATED CONCENTRATION<br>USING BD CBA KIT (PG/ML) | NOMINAL NIBSC<br>CONCENTRATION<br>(PG/ML) | BD CBA KIT: NIBSC/WHO<br>MASS CONVERSION FACTOR |
|---------------------|----------------|-------------------|-------------------------|--|---|---|
|                     | CODE NO.       | MASS UNITS / VIAL | IU VALUE                |  |   |   |
| Human IFN- $\gamma$ | 87-586         | 12.5 ng           | 250                     | 4,495.12 $\pm$ 657.67                                | 5,000                                     | 1.12  |
| Human IL-1 $\beta$  | 86-680         | 1 $\mu$ g         | 100,000                 | 3,463.92 $\pm$ 184.87                                | 5,000                                     | 1.46  |
| Human IL-2          | 86-504         | 7.6 ng            | 100                     | 3,118.99 $\pm$ 449.33                                | 5,000                                     | 1.61  |
| Human IL-4          | 88-656         | 100 ng            | 1,000                   | 5,717.84 $\pm$ 632.51                                | 5,000                                     | 0.88  |
| Human IL-5          | 90-586         | 500 ng            | 5,000                   | 3,892.01 $\pm$ 501.66                                | 5,000                                     | 1.30  |
| Human IL-6          | 89-548         | 1 $\mu$ g         | 100,000                 | 4,986.28 $\pm$ 633.36                                | 5,000                                     | 1.01  |
| Human IL-8          | 89-520         | 1 $\mu$ g         | 1,000                   | 3,359.12 $\pm$ 319.33                                | 2,500                                     | 0.74  |
| Human IL-10         | 93-722         | 1 $\mu$ g         | 5,000                   | 4,389.72 $\pm$ 469.84                                | 5,000                                     | 1.14  |
| Human IL-12p70      | 95-544         | 1 $\mu$ g         | 10,000                  | 3,764.63 $\pm$ 276.73                                | 5,000                                     | 1.34  |
| Human MCP-1         | 92-794         | 5 $\mu$ g         | 5,000 arbitrary units   | 2,653.49 $\pm$ 159.89                                | 2,500                                     | 0.95  |
| Human RANTES        | 92-520         | 10 $\mu$ g        | 100,000 arbitrary units | 1,116.63 $\pm$ 90.04                                 | 2,500                                     | 2.26  |
| Human TNF           | 88-786         | 1 $\mu$ g         | 46,500                  | 3,651.85 $\pm$ 417.15                                | 5,000                                     | 1.38  |
| Mouse IL-2          | 93-566         | 100 ng            | 10,000 arbitrary units  | 627.37 $\pm$ 26.29                                   | 5,000                                     | 8.03  |
| Mouse IL-4          | 91-656         | 1 $\mu$ g         | 10,000 arbitrary units  | 867.48 $\pm$ 59.91                                   | 5,000                                     | 5.81  |
| Mouse IL-6          | 93-730         | 100 ng            | 10,000 arbitrary units  | 486.43 $\pm$ 52.42                                   | 5,000                                     | 10.26   |
| Mouse TNF           | 88-532         | 1 $\mu$ g         | 200,000 arbitrary units | 2,328.01 $\pm$ 140.83                                | 5,000                                     | 2.17  |

## BD CBA Product List

### BD CBA Flex Sets

Cell Signaling – Human, Mouse, Rat

| DESCRIPTION                                   | REACT       | APPS | REG | SIZE      | CAT. NO. |
|---|-------------|------|-----|-----------|----------|
| Human GAPDH Flex Set (Bead A9)                | Hu          | FCM  | RUO | 100 tests | 560792   |
| Phospho BLNK (Y84) Flex Set (Bead C9)         | Hu          | FCM  | RUO | 100 tests | 560063   |
| Phospho Btk (Y551) Flex Set (Bead D5)         | Hu          | FCM  | RUO | 100 tests | 560004   |
| Phospho c-Jun (S63) Flex Set (Bead D8)        | Hu          | FCM  | RUO | 100 tests | 560059   |
| Phospho eNos (S1177) Flex Set (Bead C7)       | Hu, Ms      | FCM  | RUO | 100 tests | 560021   |
| Phospho eNos (T495) Flex Set (Bead C7)        | Hu          | FCM  | RUO | 100 tests | 560065   |
| Phospho ERK1/2 (T202/Y204) Flex Set (Bead C4) | Hu, Ms, Rat | FCM  | RUO | 100 tests | 560012   |
| Phospho Itk (Y511) Flex Set (Bead C6)         | Hu, Ms, Rat | FCM  | RUO | 100 tests | 560008   |
| Phospho JNK1/2 (T183/Y185) Flex Set (Bead B5) | Hu, Ms, Rat | FCM  | RUO | 100 tests | 560013   |
| Phospho MEK1/2 (S222) Flex Set (Bead A6)      | Hu          | FCM  | RUO | 100 tests | 560150   |
| Phospho p38 (T180/Y182) Flex Set (Bead B6)    | Hu, Ms, Rat | FCM  | RUO | 100 tests | 560010   |
| Phospho PLC-γ (Y783) Flex Set (Bead B7)       | Hu, Ms, Rat | FCM  | RUO | 100 tests | 560009   |
| Phospho Rsk (T573) Flex Set (Bead D7)         | Hu, Ms, Rat | FCM  | RUO | 100 tests | 560024   |
| Phospho SLP-76 (Y145) Flex Set (Bead D6)      | Hu          | FCM  | RUO | 100 tests | 560067   |
| Phospho Stat1 (Y701) Flex Set (Bead C5)       | Hu          | FCM  | RUO | 100 tests | 560015   |
| Phospho Stat3 (Y705) Flex Set (Bead C8)       | Hu          | FCM  | RUO | 100 tests | 560093   |
| Phospho Syk (Y352) Flex Set (Bead B9)         | Hu, Ms, Rat | FCM  | RUO | 100 tests | 560014   |
| Phospho ZAP-70 (Y319) Flex Set (Bead B8)      | Hu, Ms      | FCM  | RUO | 100 tests | 560011   |
| Total Jnk Flex Set (Bead B5)                  | Hu          | FCM  | RUO | 100 tests | 560214   |
| Total p38-α Flex Set (Bead B6)                | Hu          | FCM  | RUO | 100 tests | 560145   |
| Total Stat1 Flex Set (Bead C5)                | Hu, Ms, Rat | FCM  | RUO | 100 tests | 560017   |
| Total Syk Flex Set (Bead B9)                  | Hu          | FCM  | RUO | 100 tests | 560020   |
| Total ZAP-70 Flex Set (Bead B8)               | Hu, Ms, Rat | FCM  | RUO | 100 tests | 560019   |

### BD CBA Flex Sets

Cell Signaling – Supporting Reagents

| DESCRIPTION   | APPS | REG | SIZE      | CAT. NO. |
|---|------|-----|-----------|----------|
| Cell Signaling Master Buffer Kit<br>(Required for use with BD CBA Cell Signaling Flex Sets) | FCM  | RUO | 100 tests | 560005   |
|   | FCM  | RUO | 500 tests | 560006   |
| Wash Buffer   | FCM  | RUO | 130 mL    | 560105   |
| 30-Plex Bead Mixture (Used for verification of instrument setup)                            | FCM  | RUO | 1 vial    | 558522   |

### BD CBA Flex Sets

Cell Signaling – Standards

| DESCRIPTION                         | APPS | REG | FORMAT      | SIZE   | CAT. NO. |
|-------------------------------------|------|-----|-------------|--------|----------|
| Phospho ERK1/2 (T202/Y204) Standard | FCM  | RUO | Lyophilized | 1 vial | 560027   |
| Phospho JNK1/2 (T183/Y185) Standard | FCM  | RUO | Lyophilized | 1 vial | 560029   |
| Phospho p38 (T180/Y182) Standard    | FCM  | RUO | Lyophilized | 1 vial | 560028   |

## BD CBA Product List *(continued)*

### BD CBA Flex Sets

*Soluble Proteins – Human*

| DESCRIPTION  | APPS | REG | SIZE      | CAT. NO. |
|--|------|-----|-----------|----------|
| Human Angiogenin Flex Set (Bead C4)                | FCM  | RUO | 100 tests | 558328   |
| Human Basic FGF Flex Set (Bead C5)                 | FCM  | RUO | 100 tests | 558327   |
| Human Soluble CD14 Flex Set (Bead D7)              | FCM  | RUO | 100 tests | 560418   |
| Human CD54 (ICAM-1) Flex Set (Bead A4)             | FCM  | RUO | 100 tests | 560269   |
| Human CD62E (E-Selectin) Flex Set (Bead D9)        | FCM  | RUO | 100 tests | 560419   |
| Human CD62L (L-Selectin) Flex Set (Bead D8)        | FCM  | RUO | 100 tests | 560420   |
| Human CD62P (P-Selectin) Flex Set (Bead D7)        | FCM  | RUO | 100 tests | 560426   |
| Human CD106 (VCAM-1) Flex Set (Bead D6)            | FCM  | RUO | 100 tests | 560427   |
| Human Soluble CD121a (IL-1 RI) Flex Set (Bead B6)  | FCM  | RUO | 100 tests | 560276   |
| Human Soluble CD121b (IL-1 RII) Flex Set (Bead B7) | FCM  | RUO | 100 tests | 560281   |
| Human sCD154 (sCD40 Ligand) Flex Set (Bead C7)     | FCM  | RUO | 100 tests | 560305   |
| Human CD178 (Fas Ligand) Flex Set (Bead C6)        | FCM  | RUO | 100 tests | 558330   |
| Human Eotaxin Flex Set (Bead C7)                   | FCM  | RUO | 100 tests | 558329   |
| Human Fractalkine Flex Set (Bead C6)               | FCM  | RUO | 100 tests | 560265   |
| Human G-CSF Flex Set (Bead C8)                     | FCM  | RUO | 100 tests | 558326   |
| Human GM-CSF Flex Set (Bead C9)                    | FCM  | RUO | 100 tests | 558335   |
| Human Granzyme A Flex Set (Bead D9)                | FCM  | RUO | 100 tests | 560299   |
| Human Granzyme B Flex Set (Bead D7)                | FCM  | RUO | 100 tests | 560304   |
| Human IFN- $\alpha$ Flex Set (Bead B8)             | FCM  | RUO | 100 tests | 560379   |
| Human IFN- $\gamma$ Flex Set (Bead B8)             | FCM  | RUO | 100 tests | 560111   |
| Human IFN- $\gamma$ Flex Set (Bead E7)             | FCM  | RUO | 100 tests | 558269   |
| Human IL-1 $\alpha$ Flex Set (Bead D6)             | FCM  | RUO | 100 tests | 560153   |
| Human IL-1 $\beta$ Flex Set (Bead B4)              | FCM  | RUO | 100 tests | 558279   |
| Human IL-2 Flex Set (Bead A4)                      | FCM  | RUO | 100 tests | 558270   |
| Human IL-3 Flex Set (Bead D5)                      | FCM  | RUO | 100 tests | 558355   |
| Human IL-4 Flex Set (Bead A5)                      | FCM  | RUO | 100 tests | 558272   |
| Human IL-5 Flex Set (Bead A6)                      | FCM  | RUO | 100 tests | 558278   |
| Human IL-6 Flex Set (Bead A7)                      | FCM  | RUO | 100 tests | 558276   |
| Human IL-7 Flex Set (Bead A8)                      | FCM  | RUO | 100 tests | 558334   |
| Human IL-8 Flex Set (Bead A9)                      | FCM  | RUO | 100 tests | 558277   |
| Human IL-9 Flex Set (Bead B6)                      | FCM  | RUO | 100 tests | 558333   |
| Human IL-10 Flex Set (Bead B7)                     | FCM  | RUO | 100 tests | 558274   |
| Human IL-11 Flex Set (Bead D5)                     | FCM  | RUO | 100 tests | 560228   |
| Human IL-12/IL-23p40 Flex Set (Bead E5)            | FCM  | RUO | 100 tests | 560154   |
| Human IL-12p70 Flex Set (Bead E5)                  | FCM  | RUO | 100 tests | 558283   |
| Human IL-13 Flex Set (Bead E6)                     | FCM  | RUO | 100 tests | 558450   |
| Human IL-17A Flex Set (Bead B5)                    | FCM  | RUO | 100 tests | 560383   |
| Human IL-17F Flex Set (Bead C6)                    | FCM  | RUO | 100 tests | 562151   |
| Human IL-21 Flex Set (Bead B8)                     | FCM  | RUO | 100 tests | 560358   |
| Human IP-10 Flex Set (Bead B5)                     | FCM  | RUO | 100 tests | 558280   |
| Human I-TAC Flex Set (Bead A7)                     | FCM  | RUO | 100 tests | 560364   |
| Human LT- $\alpha$ Flex Set (Bead D5)              | FCM  | RUO | 100 tests | 560083   |
| Human MCP-1 Flex Set (Bead D8)                     | FCM  | RUO | 100 tests | 558287   |
| Human MIG Flex Set (Bead E8)                       | FCM  | RUO | 100 tests | 558286   |
| Human MIP-1 $\alpha$ Flex Set (Bead B9)            | FCM  | RUO | 100 tests | 558325   |
| Human MIP-1 $\beta$ Flex Set (Bead E4)             | FCM  | RUO | 100 tests | 558288   |
| Human RANTES Flex Set (Bead D4)                    | FCM  | RUO | 100 tests | 558324   |
| Human TGF- $\beta$ 1 Single Plex Flex Set          | FCM  | RUO | 100 tests | 560429   |
| Human TNF Flex Set (Bead C4)                       | FCM  | RUO | 100 tests | 560112   |
| Human TNF Flex Set (Bead D9)                       | FCM  | RUO | 100 tests | 558273   |
| Human Soluble TNFRI Flex Set (Bead C4)             | FCM  | RUO | 100 tests | 560156   |
| Human Soluble TNFRII Flex Set (Bead C5)            | FCM  | RUO | 100 tests | 560155   |
| Human VEGF Flex Set (Bead B8)                      | FCM  | RUO | 100 tests | 558336   |

## BD CBA Product List (continued)

### BD CBA Flex Sets

Enhanced Sensitivity - Human

| DESCRIPTION   | APPS | REG | SIZE      | CAT. NO. |
|---|------|-----|-----------|----------|
| Human IFN- $\gamma$ Enhanced Sensitivity Flex Set (Bead B8) | FCM  | RUO | 100 tests | 561515   |
| Human IL-1 $\beta$ Enhanced Sensitivity Flex Set (Bead B4)  | FCM  | RUO | 100 tests | 561509   |
| Human IL-2 Enhanced Sensitivity Flex Set (Bead A4)          | FCM  | RUO | 100 tests | 561517   |
| Human IL-4 Enhanced Sensitivity Flex Set (Bead A5)          | FCM  | RUO | 100 tests | 561510   |
| Human IL-5 Enhanced Sensitivity Flex Set (Bead A6)          | FCM  | RUO | 100 tests | 561511   |
| Human IL-6 Enhanced Sensitivity Flex Set (Bead A7)          | FCM  | RUO | 100 tests | 561512   |
| Human IL-8 Enhanced Sensitivity Flex Set (Bead A9)          | FCM  | RUO | 100 tests | 561513   |
| Human IL-10 Enhanced Sensitivity Flex Set (Bead B7)         | FCM  | RUO | 100 tests | 561514   |
| Human IL-12 p70 Enhanced Sensitivity Flex Set (Bead C6)     | FCM  | RUO | 100 tests | 561518   |
| Human IL-17A Enhanced Sensitivity Flex Set (Bead B5)        | FCM  | RUO | 100 tests | 562143   |
| Human TNF Enhanced Sensitivity Flex Set (Bead C4)           | FCM  | RUO | 100 tests | 561516   |

### BD CBA Flex Sets

Soluble Proteins - Immunoglobulins

| DESCRIPTION                        | APPS | REG | SIZE      | CAT. NO. |
|------------------------------------|------|-----|-----------|----------|
| Human IgA Flex Set (Bead C9)       | FCM  | RUO | 100 tests | 558681   |
| Human IgG2 Flex Set (Bead C5)      | FCM  | RUO | 100 tests | 558676   |
| Human IgG3 Flex Set (Bead C6)      | FCM  | RUO | 100 tests | 558677   |
| Human IgG4 Flex Set (Bead C7)      | FCM  | RUO | 100 tests | 558678   |
| Human IgE Flex Set (Bead E9)       | FCM  | RUO | 100 tests | 558682   |
| Human IgM Flex Set (Bead C8)       | FCM  | RUO | 100 tests | 558680   |
| Human Total IgG Flex Set (Bead C6) | FCM  | RUO | 100 tests | 558679   |

### BD CBA Flex Sets

Soluble Proteins - Mouse

| DESCRIPTION                                 | APPS | REG | SIZE      | CAT. NO. |
|---|------|-----|-----------|----------|
| Mouse CD62E (E-Selectin) Flex Set (Bead E6) | FCM  | RUO | 100 tests | 560384   |
| Mouse CD62L (L-Selectin) Flex Set (Bead E7) | FCM  | RUO | 100 tests | 560385   |
| Mouse G-CSF Flex Set (Bead D4)              | FCM  | RUO | 100 tests | 560152   |
| Mouse GM-CSF Flex Set (Bead B9)             | FCM  | RUO | 100 tests | 558347   |
| Mouse IFN- $\gamma$ Flex Set (Bead A4)      | FCM  | RUO | 100 tests | 558296   |
| Mouse IL-1 $\alpha$ Flex Set (Bead E4)      | FCM  | RUO | 100 tests | 560157   |
| Mouse IL-1 $\beta$ Flex Set (Bead E5)       | FCM  | RUO | 100 tests | 560232   |
| Mouse IL-2 Flex Set (Bead A5)               | FCM  | RUO | 100 tests | 558297   |
| Mouse IL-3 Flex Set (Bead A8)               | FCM  | RUO | 100 tests | 558346   |
| Mouse IL-4 Flex Set (Bead A7)               | FCM  | RUO | 100 tests | 558298   |
| Mouse IL-5 Flex Set (Bead A6)               | FCM  | RUO | 100 tests | 558302   |
| Mouse IL-6 Flex Set (Bead B4)               | FCM  | RUO | 100 tests | 558301   |
| Mouse IL-9 Flex Set (Bead B5)               | FCM  | RUO | 100 tests | 558348   |
| Mouse IL-10 Flex Set (Bead C4)              | FCM  | RUO | 100 tests | 558300   |
| Mouse IL-12/IL-23p40 Flex Set (Bead D7)     | FCM  | RUO | 100 tests | 560151   |
| Mouse IL-12p70 Flex Set (Bead D7)           | FCM  | RUO | 100 tests | 558303   |
| Mouse IL-13 Flex Set (Bead B8)              | FCM  | RUO | 100 tests | 558349   |
| Mouse IL-17A Flex Set (Bead B5)             | FCM  | RUO | 100 tests | 560283   |
| Mouse IL-17F Flex Set (Bead D6)             | FCM  | RUO | 100 tests | 562174   |
| Mouse IL-21 Flex Set (Bead B6)              | FCM  | RUO | 100 tests | 560160   |
| Mouse IL-23 p19/p40 Flex Set (Bead D7)      | FCM  | RUO | 100 tests | 562575   |
| Mouse KC Flex Set (Bead A9)                 | FCM  | RUO | 100 tests | 558340   |
| Mouse MCP-1 Flex Set (Bead B7)              | FCM  | RUO | 100 tests | 558342   |
| Mouse MIG Flex Set (Bead D9)                | FCM  | RUO | 100 tests | 558341   |
| Mouse MIP-1 $\alpha$ Flex Set (Bead C7)     | FCM  | RUO | 100 tests | 558449   |
| Mouse MIP-1 $\beta$ Flex Set (Bead C9)      | FCM  | RUO | 100 tests | 558343   |
| Mouse RANTES Flex Set (Bead D8)             | FCM  | RUO | 100 tests | 558345   |
| Mouse TNF Flex Set (Bead C8)                | FCM  | RUO | 100 tests | 558299   |

## BD CBA Product List *(continued)*

### BD CBA Flex Sets

#### Enhanced Sensitivity - Mouse

| DESCRIPTION   | APPS | REG | SIZE      | CAT. NO. |
|---|------|-----|-----------|----------|
| Mouse IFN- $\gamma$ Enhanced Sensitivity Flex Set (Bead A4) | FCM  | RUO | 100 tests | 562233   |
| Mouse IL-1 $\beta$ Enhanced Sensitivity Flex Set (Bead B9)  | FCM  | RUO | 100 tests | 562278   |
| Mouse IL-2 Enhanced Sensitivity Flex Set (Bead A5)          | FCM  | RUO | 100 tests | 562262   |
| Mouse IL-4 Enhanced Sensitivity Flex Set (Bead A7)          | FCM  | RUO | 100 tests | 562272   |
| Mouse IL-5 Enhanced Sensitivity Flex Set (Bead A6)          | FCM  | RUO | 100 tests | 562234   |
| Mouse IL-6 Enhanced Sensitivity Flex Set (Bead B4)          | FCM  | RUO | 100 tests | 562236   |
| Mouse IL-10 Enhanced Sensitivity Flex Set (Bead C4)         | FCM  | RUO | 100 tests | 562263   |
| Mouse IL-12 p70 Enhanced Sensitivity Flex Set (Bead D7)     | FCM  | RUO | 100 tests | 562264   |
| Mouse IL-13 Enhanced Sensitivity Flex Set (Bead B8)         | FCM  | RUO | 100 tests | 562273   |
| Mouse IL-17A Enhanced Sensitivity Flex Set (Bead C5)        | FCM  | RUO | 100 tests | 562261   |
| Mouse TNF Enhanced Sensitivity Flex Set (Bead C8)           | FCM  | RUO | 100 tests | 562336   |

### BD CBA Flex Sets

#### Soluble Proteins - Rat

| DESCRIPTION                          | APPS | REG | SIZE      | CAT. NO. |
|--------------------------------------|------|-----|-----------|----------|
| Rat IFN- $\gamma$ Flex Set (Bead A6) | FCM  | RUO | 100 tests | 558305   |
| Rat IL-1 $\alpha$ Flex Set (Bead A4) | FCM  | RUO | 100 tests | 560159   |
| Rat IL-2 Flex Set (Bead E5)          | FCM  | RUO | 100 tests | 561420   |
| Rat IL-4 Flex Set (Bead B9)          | FCM  | RUO | 100 tests | 558307   |
| Rat IL-6 Flex Set (Bead A9)          | FCM  | RUO | 100 tests | 558308   |
| Rat IL-10 Flex Set (Bead A8)         | FCM  | RUO | 100 tests | 558306   |
| Rat TNF Flex Set (Bead C8)           | FCM  | RUO | 100 tests | 558309   |

### BD CBA Flex Sets

#### Soluble Proteins - Supporting Reagents

| DESCRIPTION  | APPS | REG | SIZE      | CAT. NO. |
|--|------|-----|-----------|----------|
| <b>Human Soluble Protein Master Buffer Kit</b><br>(Required for use with BD CBA Human Soluble Protein Flex Sets)           | FCM  | RUO | 100 tests | 558264   |
|  | FCM  | RUO | 500 tests | 558265   |
| <b>Human Enhanced Sensitivity Master Buffer Kit</b><br>(Required for use with BD CBA Human Enhanced Sensitivity Flex Sets) | FCM  | RUO | 100 tests | 561521   |
|  | FCM  | RUO | 500 tests | 561523   |
| <b>Human Immunoglobulin Master Buffer Kit</b><br>(Required for use with BD CBA Human Ig Flex Sets)                         | FCM  | RUO | 100 tests | 558683   |
| <b>Mouse/Rat Soluble Protein Master Buffer Kit</b><br>(Required for use with BD CBA Mouse/Rat Soluble Protein Flex Sets)   | FCM  | RUO | 100 tests | 558266   |
|  | FCM  | RUO | 500 tests | 558267   |
| <b>Mouse Enhanced Sensitivity Master Buffer Kit</b><br>(Required for use with BD CBA Mouse Enhanced Sensitivity Flex Sets) | FCM  | RUO | 100 tests | 562246   |
|  | FCM  | RUO | 500 tests | 562248   |
| <b>Assay Diluent</b>   | FCM  | RUO | 30 mL     | 560104   |
| <b>Enhanced Sensitivity Detection Reagent (Part B)</b>   | FCM  | RUO | 1 vial    | 561519   |
| <b>Wash Buffer</b>   | FCM  | RUO | 130 mL    | 560105   |
| <b>30 Plex Bead Mixture</b><br>(Used for verification of instrument setup)   | FCM  | RUO | 1 vial    | 558522   |

## BD CBA Product List *(continued)*

### BD CBA Flex Sets

*Soluble Proteins - Standards*

| DESCRIPTION                            | APPS | REG | FORMAT      | SIZE   | CAT. NO. |
|--|------|-----|-------------|--------|----------|
| Human IFN- $\gamma$ Flex Set Standard  | FCM  | RUO | Lyophilized | 1 vial | 558456   |
| Human IL-1 $\beta$ Flex Set Standard   | FCM  | RUO | Lyophilized | 1 vial | 558457   |
| Human IL-2 Flex Set Standard           | FCM  | RUO | Lyophilized | 1 vial | 558461   |
| Human IL-4 Flex Set Standard           | FCM  | RUO | Lyophilized | 1 vial | 558462   |
| Human IL-5 Flex Set Standard           | FCM  | RUO | Lyophilized | 1 vial | 558463   |
| Human IL-6 Flex Set Standard           | FCM  | RUO | Lyophilized | 1 vial | 558464   |
| Human IL-8 Flex Set Standard           | FCM  | RUO | Lyophilized | 1 vial | 558465   |
| Human IL-10 Flex Set Standard          | FCM  | RUO | Lyophilized | 1 vial | 558458   |
| Human IL-12 p70 Flex Set Standard      | FCM  | RUO | Lyophilized | 1 vial | 558459   |
| Human IL-13 Flex Set Standard          | FCM  | RUO | Lyophilized | 1 vial | 558460   |
| Human IL-17A Flex Set Standard         | FCM  | RUO | Lyophilized | 1 vial | 561668   |
| Human IP-10 Flex Set Standard          | FCM  | RUO | Lyophilized | 1 vial | 558466   |
| Human MCP-1 Flex Set Standard          | FCM  | RUO | Lyophilized | 1 vial | 558467   |
| Human MIP-1 $\alpha$ Flex Set Standard | FCM  | RUO | Lyophilized | 1 vial | 558468   |
| Human MIP-1 $\beta$ Flex Set Standard  | FCM  | RUO | Lyophilized | 1 vial | 558469   |
| Human RANTES Flex Set Standard         | FCM  | RUO | Lyophilized | 1 vial | 558470   |
| Human TNF Flex Set Standard            | FCM  | RUO | Lyophilized | 1 vial | 558472   |
| Mouse IFN- $\gamma$ Flex Set Standard  | FCM  | RUO | Lyophilized | 1 vial | 558473   |
| Mouse IL-1 $\beta$ Flex Set Standard   | FCM  | RUO | Lyophilized | 1 vial | 561667   |
| Mouse IL-2 Flex Set Standard           | FCM  | RUO | Lyophilized | 1 vial | 558476   |
| Mouse IL-4 Flex Set Standard           | FCM  | RUO | Lyophilized | 1 vial | 558477   |
| Mouse IL-5 Flex Set Standard           | FCM  | RUO | Lyophilized | 1 vial | 558478   |
| Mouse IL-6 Flex Set Standard           | FCM  | RUO | Lyophilized | 1 vial | 558479   |
| Mouse IL-10 Flex Set Standard          | FCM  | RUO | Lyophilized | 1 vial | 558474   |
| Mouse IL-12p70 Flex Set Standard       | FCM  | RUO | Lyophilized | 1 vial | 558475   |
| Mouse IL-17A Flex Set Standard         | FCM  | RUO | Lyophilized | 1 vial | 561669   |
| Mouse TNF Flex Set Standard            | FCM  | RUO | Lyophilized | 1 vial | 558480   |
| Rat IFN- $\gamma$ Flex Set Standard    | FCM  | RUO | Lyophilized | 1 vial | 558481   |
| Rat IL-6 Flex Set Standard             | FCM  | RUO | Lyophilized | 1 vial | 558483   |
| Rat IL-10 Flex Set Standard            | FCM  | RUO | Lyophilized | 1 vial | 558482   |
| Rat TNF Flex Set Standard              | FCM  | RUO | Lyophilized | 1 vial | 558484   |

## BD CBA Product List *(continued)*

### BD CBA Flex Sets

#### Functional Beads

| DESCRIPTION          | APPS  | REG | SIZE        | CAT. NO. |
|----------------------|-------|-----|-------------|----------|
| Functional Bead (A4) | Array | RUO | 6,000 tests | 558578   |
| Functional Bead (A5) | Array | RUO | 6,000 tests | 560031   |
| Functional Bead (A6) | Array | RUO | 6,000 tests | 560032   |
| Functional Bead (A7) | Array | RUO | 6,000 tests | 560033   |
| Functional Bead (A8) | Array | RUO | 6,000 tests | 560034   |
| Functional Bead (A9) | Array | RUO | 6,000 tests | 558579   |
| Functional Bead (B4) | Array | RUO | 6,000 tests | 560035   |
| Functional Bead (B5) | Array | RUO | 6,000 tests | 558586   |
| Functional Bead (B6) | Array | RUO | 6,000 tests | 558645   |
| Functional Bead (B7) | Array | RUO | 6,000 tests | 558580   |
| Functional Bead (B8) | Array | RUO | 6,000 tests | 558581   |
| Functional Bead (B9) | Array | RUO | 6,000 tests | 558646   |
| Functional Bead (C4) | Array | RUO | 6,000 tests | 558647   |
| Functional Bead (C5) | Array | RUO | 6,000 tests | 558648   |
| Functional Bead (C6) | Array | RUO | 6,000 tests | 558582   |
| Functional Bead (C7) | Array | RUO | 6,000 tests | 558587   |
| Functional Bead (C8) | Array | RUO | 6,000 tests | 558649   |
| Functional Bead (C9) | Array | RUO | 6,000 tests | 558650   |
| Functional Bead (D4) | Array | RUO | 6,000 tests | 560036   |
| Functional Bead (D5) | Array | RUO | 6,000 tests | 558583   |
| Functional Bead (D6) | Array | RUO | 6,000 tests | 558654   |
| Functional Bead (D7) | Array | RUO | 6,000 tests | 558655   |
| Functional Bead (D8) | Array | RUO | 6,000 tests | 558656   |
| Functional Bead (D9) | Array | RUO | 6,000 tests | 558657   |
| Functional Bead (E4) | Array | RUO | 6,000 tests | 558584   |
| Functional Bead (E5) | Array | RUO | 6,000 tests | 560037   |
| Functional Bead (E6) | Array | RUO | 6,000 tests | 560038   |
| Functional Bead (E7) | Array | RUO | 6,000 tests | 560039   |
| Functional Bead (E8) | Array | RUO | 6,000 tests | 560040   |
| Functional Bead (E9) | Array | RUO | 6,000 tests | 558585   |

### BD CBA Flex Sets

#### Functional Beads - Supporting Reagents

| DESCRIPTION  | REACT | CLONE      | ISOTYPE                             | APPS | REG | FORMAT | SIZE         | CAT. NO. |
|--|-------|------------|-------------------------------------|------|-----|--------|--------------|----------|
| <b>Functional Bead Conjugation Buffer Set</b><br>(Required for use with BD CBA Functional Beads) |       |            |                                     | FCM  | RUO | Set    | 15 reactions | 558556   |
| <b>Mouse Ig Detector</b><br>(PE-labeled antibody for confirmation of conjugation)                | Ms    | Polyclonal | Goat Ig                             | FCM  | RUO | PE     | 25 tests     | 558550   |
| <b>Rabbit IgG Detector</b><br>(PE-labeled antibody for confirmation of conjugation)              | Rab   | C101-359   | Mouse (BALB/c) IgG <sub>1</sub> , κ | FCM  | RUO | PE     | 25 tests     | 558553   |
| <b>Rat Ig Detector</b><br>(PE-labeled antibody for confirmation of conjugation)                  | Rat   | Poly1271   | Goat Ig                             | FCM  | RUO | PE     | 25 tests     | 558551   |

## BD CBA Product List (continued)

### BD CBA Kits

#### Human

| DESCRIPTION                     | APPS | REG | FORMAT   | SIZE     | CAT. NO. |
|---------------------------------|------|-----|--|----------|----------|
| Human Anaphylatoxin Kit         | FCM  | RUO | C4a, C3a, C5a  | 80 tests | 561418   |
| Human Chemokine Kit             | FCM  | RUO | IL-8, RANTES, MIG, MCP-1, IP-10                      | 80 tests | 552990   |
| Human Inflammatory Cytokine Kit | FCM  | RUO | IL-8, IL-1 $\beta$ , IL-6, IL-10, TNF, IL-12p70      | 80 tests | 551811   |
| Human Th1/Th2 Cytokine Kit      | FCM  | RUO | IL-2, IL-4, IL-5, IL-10, TNF, IFN- $\gamma$          | 80 tests | 550749   |
| Human Th1/Th2 Cytokine Kit II   | FCM  | RUO | IL-2, IL-4, IL-6, IL-10, TNF, IFN- $\gamma$          | 80 tests | 551809   |
| Human Th1/Th2/Th17 Kit          | FCM  | RUO | IL-2, IL-4, IL-6, IL-10, TNF, IFN- $\gamma$ , IL-17A | 80 tests | 560484   |

### BD CBA Kits

#### Mouse

| DESCRIPTION                        | APPS | REG | FORMAT  | SIZE      | CAT. NO. |
|------------------------------------|------|-----|---|-----------|----------|
| Mouse Immunoglobulin Isotyping Kit | FCM  | RUO | Heavy and light chain isotypes of IgG <sub>1</sub> , IgG <sub>2a</sub> , IgG <sub>2b</sub> , IgG <sub>3</sub> , IgA, IgM, IgE | 100 tests | 550026   |
| Mouse Inflammation Kit             | FCM  | RUO | IL-6, IL-10, MCP-1, IFN- $\gamma$ , TNF, IL-12p70   | 80 tests  | 552364   |
| Mouse Th1/Th2 Cytokine Kit         | FCM  | RUO | IL-2, IL-4, IL-5, IFN- $\gamma$ , TNF   | 80 tests  | 551287   |
| Mouse Th1/Th2/Th17 Kit             | FCM  | RUO | IL-2, IL-4, IL-6, IFN- $\gamma$ , TNF, IL-17A, IL-10  | 80 tests  | 560485   |

### BD CBA Kits

#### Non-Human Primate

| DESCRIPTION                            | APPS | REG | FORMAT                                     | SIZE     | CAT. NO. |
|--|------|-----|--|----------|----------|
| Non-human Primate Th1/Th2 Cytokine Kit | FCM  | RUO | IL-2, IL-4, IL-5, IL-6, TNF, IFN- $\gamma$ | 80 tests | 557800   |

### BD CBA Kits

#### Standards

| DESCRIPTION                                      | APPS | REG | FORMAT   | SIZE   | CAT. NO. |
|--|------|-----|--|--------|----------|
| Human Inflammatory Cytokine Lyophilized Standard | FCM  | RUO | IL-8, IL-1 $\beta$ , IL-6, IL-10, TNF, IL-12p70      | 1 vial | 552932   |
| Human Th1/Th2 Cytokine Lyophilized Standard      | FCM  | RUO | IL-2, IL-4, IL-5, IL-6, IL-10, TNF, IFN- $\gamma$    | 1 vial | 551810   |
| Human Th1/Th2/Th17 Cytokine Lyophilized Standard | FCM  | RUO | IL-2, IL-4, IL-6, IL-10, TNF, IFN- $\gamma$ , IL-17A | 1 vial | 561666   |
| Mouse Inflammation Lyophilized Standard          | FCM  | RUO | IL-6, IL-10, MCP-1, TNF, IFN- $\gamma$ , IL-12p70    | 1 vial | 620280   |
| Mouse Th1/Th2 Cytokine Lyophilized Standard      | FCM  | RUO | IL-2, IL-4, IL-5, IFN- $\gamma$ , TNF                | 1 vial | 552967   |
| Mouse Th1/Th2/Th17 Cytokine Lyophilized Standard | FCM  | RUO | IL-2, IL-4, IL-6, IFN- $\gamma$ , TNF, IL-17A, IL-10 | 1 vial | 561665   |

### Software

| DESCRIPTION  | APPS | REG | FORMAT  | CAT. NO. |
|--|------|-----|---|----------|
| FCAP Array™ v3.0 (PC, Windows® XP, Windows Vista, Windows 7)<br>(Required for quantitative analysis of BD CBA Flex Set and Kit products) | FCM  | RUO | PC Compatible DVD, User's Guide, and Hardware Key                   | 652099   |
| FCAP Array v1.0.2 (Mac® OS)<br>(Required for quantitative analysis of BD CBA Flex Set and Kit products)                                  | FCM  | RUO | Mac OS CD-ROM, User's Guide, and Hardware Key                       | 645447   |
| BD Accuri™ Selectable Laser Module<br>(Required for BD CBA Flex Sets on the BD Accuri C6 flow cytometer)                                 | FCM  | RUO | Includes Activation Key and Optical filters: 780/60, 610/20, 630/30 | 653126   |

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23-12414-02

