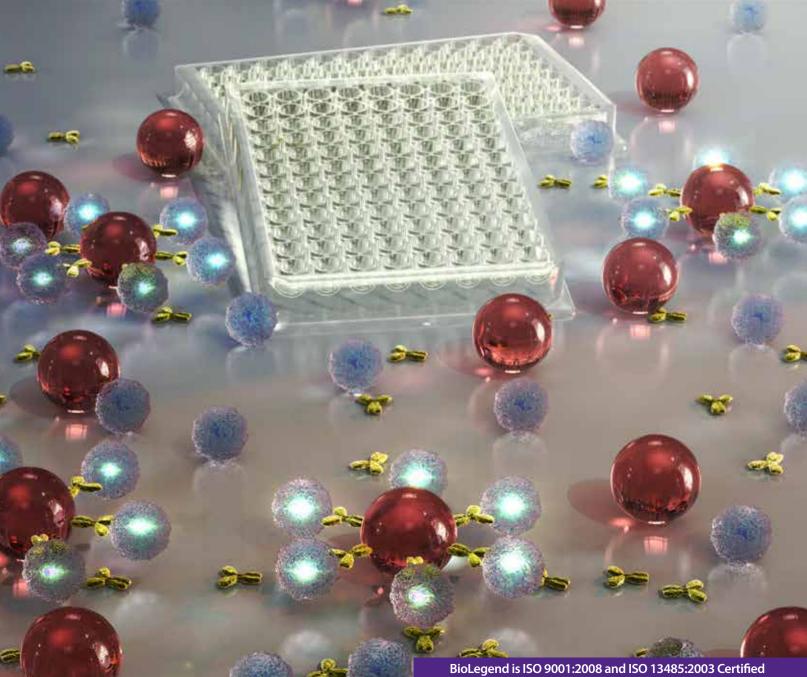
# LEGENDplex™ Multi-Analyte Flow Assay Kits





Toll-Free Tel: (US & Canada): 1.877.BIOLEGEND (246.5343) Tel: 858.768.5800 biolegend.com

02-0009-03



World-Class Quality | Superior Customer Support | Outstanding Value

LEGENDplex<sup>™</sup> Multi-Analyte Flow Assay Kits are bead-based immunoassays for simultaneous quantification of multiple analytes in a single sample using a standard flow cytometer. Free, intuitive software enables fast and easy analysis of your data.

Kits can be ordered as either Pre-defined Panels (*e.g.*, Th1, Th2, Th17) or Mix and Match (choose your own specificities within a panel). The reagents are provided in a ready-to-use format, saving reagent preparation time.

### **LEGENDplex<sup>™</sup> features:**

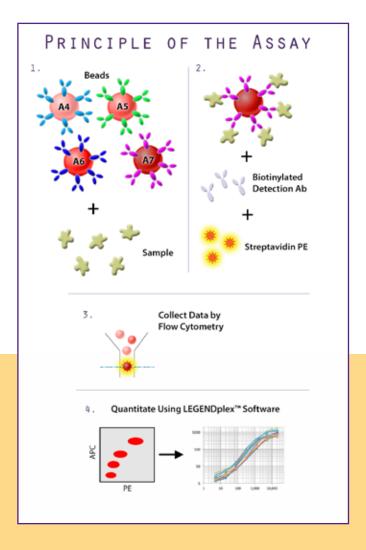
- Multiplex bead assays on common flow cytometers
- Pre-defined Panels or Mix and Match System
- Free data analysis software compatible with both Mac and Windows
- Affordability
- Flexibility; compatible with V-bottom plates (low-binding), and filter plates.

#### Items included in the kit:

- Setup beads
- Capture beads
- Matrix, lyophilized
- Detection antibody mix
- Standard cocktail, lyophilized
- All of the required buffers
- Filter plate or V-bottom plate and plate sealers
- Data analysis dongle
- Manual

#### Required items not included in the kit:

- Flow cytometer
- Pipettes and tips
- Reagent reservoirs for multichannel pipettes
- Polypropylene microfuge tubes
- Vortex mixer
- Sonicator (Optional)
- Plate shaker
- A vacuum filtration unit and a vacuum source (if using filter plates)
- Centrifuge



BioLegend will continue to expand the selection for LEGENDplex<sup>™</sup> products. To stay updated on these releases, visit: biolegend.com/legendplex

### **Pre-defined Panels**

The pre-defined panels provide all the reagents you'll need to run LEGENDplex<sup>™</sup>, including the setup beads, capture beads, matrix, detection antibody mix, standard cocktail, buffers, filter plates or V-bottom plates, and plate sealers.

### Mix and Match

Use the LEGENDplex<sup>™</sup> Mix and Match System if you are interested in ordering a subset of specificities within a panel. In order to use this system, you will need to order capture beads, the appropriate buffer set, standard, and detection antibodies. Depending on the panel, you may also need to order a V-bottom or a filter plate if the buffer set does not include one. This system is easy to use and cost-effective.

It is important to note that Mix and Match can only be done within panels. If you would like to combine specificities across different panels, you can make a request to our Custom Solutions Team at: cst@biolegend.com.

### How to Mix and Match

**Choose Capture Bead Specificities:** Be sure to choose specificities within the panels for each assay. If you would like to mix specificities from different panels into a single assay, our Custom Solutions Team will be able to help, otherwise they should be split into multiple assays. Verify that a Pre-defined Panel does not already exist, as these will be most cost-effective.

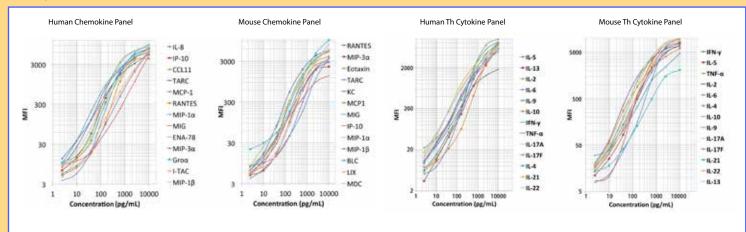
Add Standard (lyophilized) to your order: Each panel requires a single lyophilized standard mixture that contains standards for all specificities in the panel. Only one standard is required per assay.

Add Detection Antibodies to your order: Each panel requires a single mixture of Detection Antibodies. Only one Detection Antibodies product is required per assay.

Add a Buffer Set to your order: Each panel requires a Buffer Set.

Add a Plate to your order (if necessary): Some panels' Buffer Set includes a Plate, while other panels require a Plate to be added, as noted in product tables. Refer to the FAQ section of this brochure to decide which plates are appropriate for your use.

#### **Example Data**



### Human T Helper Cytokine Panels (Includes Filter Plate; V-bottom plate version coming soon)

Pre-defined Panels include ALL required components and ALL check-marked targets						Mix & Match				
Cat. No.		740001	740009	740011	740013	740015	740019	740021	740023	Capture Beads Cat. No.
Target	Bead ID	Th	Th1	Th2	Th1/Th2	Th17	Th9	Th22	Tfh	
IFN-γ	B2	~	~		~	~				740052
IL-2	A6	<ul> <li>✓</li> </ul>	~		~					740041
IL-4	B6	V		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>					740042
IL-5	A4	V		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>					740043
IL-6	A7	V	~	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>	~	740044
IL-9	A8	V					<ul> <li>✓</li> </ul>			740045
IL-10	A10	<ul> <li>✓</li> </ul>	~	<ul> <li>✓</li> </ul>	~	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	740046
IL-13	A5	<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>					740047
IL-17A	B4	<ul> <li>✓</li> </ul>				<ul> <li>✓</li> </ul>				740048
IL-17F	B5	V				<ul> <li>✓</li> </ul>				740049
IL-21	B7	V				<ul> <li>✓</li> </ul>			~	740050
IL-22	B9	×				<ul> <li>✓</li> </ul>		V		740051
TNF-α	B3	~	~	~	~	~	~	~	~	740053
Required Mix a	nd Match Components (a	ready included in Pre-	defined Panels)							
Standard						Cat. No. 74039	7			
Detection Antik	odies								Cat. No. 74007	1
Buffer Set (inclu	des Filter Plate)								Cat. No. 74007	5

### Human Cytokine Panel 2 (Includes Filter Plate)

Pre-defined Panel Cat. No. 740 Beads and all required compo	Mix & Match Capture Beads Cat. No.				
Target	Bead ID				
GM-CSF	A7	740106			
IFN-α	A8	740107			
IL-1α	A5	740104			
IL-1β	A6	740105			
IL-11	B6	740113			
IL-12 (p40)	B2	740109			
IL-12 (p70)	B3	740110			
IL-15	B4	740111			
IL-18	B5	740112			
IL-23	A10	740108			
IL-27	B7	740114			
IL-33	B9	740115			
TSLP	A4	740103			
<b>Required Mix and Match Comp</b>	Required Mix and Match Components (already included in Pre-defined Panel)				
Standard	Standard				
Detection Antibodies	Cat. No. 740116				
Buffer Set (includes Filter Plate)		Cat. No. 740075			

### Human Inflammation Panel (Includes Filter Plate)

Pre-defined Panel Cat. Beads and all required	Mix & Match Capture Beads Cat. No.		
Target	Bead ID		
CCL2 (MCP-1)	A8	740076	
IFN-α	A5	740120	
IFN-γ	A6	740121	
IL-1β	A4	740119	
IL-6	A10	740124	
IL-8	B2	740125	
IL-10	B3	740126	
IL-12 (p70)	B4	740127	
IL-17A	B5	740128	
IL-18	B6	740129	
IL-23	B7	740130	
IL-33	B9	740115	
TNF-α	A7	740122	
Required Mix and Mate	ch Components (already included in Pre	-defined Panel)	
Standard		Cat. No. 740400	
Detection Antibodies		Cat. No. 740132	
Buffer Set (includes Filte	r Plate)	Cat. No. 740075	

## Human Proinflammatory Chemokine Panel (Includes Filter Plate)

Pre-defined Panel Cat. No. 7400 Beads and all required compon	Mix & Match Capture Beads Cat. No.	
Target	Bead ID	
CCL2 (MCP-1)	A8	740076
CCL3 (MIP-1a)	B2	740077
CCL4 (MIP-1β)	B9	740078
CCL5 (RANTES)	A10	740079
CCL11 (Eotaxin)	A6	740080
CCL17 (TARC)	A7	740081
CCL20 (MIP-3α)	B5	740082
CXCL1 (GROα)	B6	740083
CXCL5 (ENA-78)	B4	740084
CXCL8 (IL-8)	A4	740085
CXCL9 (MIG)	B3	740086
CXCL10 (IP-10)	A5	740087
CXCL11 (I-TAC)	B7	740088
<b>Required Mix and Match Comp</b>	onents (already included in Pre-	defined Panel)
Standard		Cat. No. 740398
Detection Antibodies		Cat. No. 740072
Buffer Set (includes Filter Plate)		Cat. No. 740075

### Human Growth Factor Panel (Includes Filter Plate)

Pre-defined Panel Cat. No Beads and all required co	Mix & Match Capture Beads Cat. No.	
Target	Bead ID	
Angiopoietin-2	A4	740181
EGF	A5	740182
EPO	A6	740183
FGF-basic	A7	740184
G-CSF	A8	740185
GM-CSF	A10	740186
HGF	B2	740187
M-CSF	B3	740188
PDGF-AA	B4	740189
PDGF-BB	B5	740190
SCF	B6	740191
TGF-α	B7	740192
VEGF	B9	740193
Required Mix and Match	Components (already included in Pre	-defined Panel)
Standard		Cat. No. 740194
Detection Antibodies		Cat. No. 740195
Buffer Set (includes Filter P	late)	Cat. No. 740075

### Human Adipokine Panel\* (Includes Filter Plate)

Pre-defined Panel Cat. No Beads and all required co	Mix & Match Capture Beads Cat. No.	
Target	Bead ID	
Adiponectin	A4	740197
Adipsin	A5	740198
CCL2 (MCP-1)	A7	740200
CXCL10 (IP-10)	A10	740202
IFN-γ	B6	740207
IL-1β	A8	740201
IL-6	B5	740206
IL-8	B3	740204
IL-10	B2	740203
Leptin	B4	740205
RBP4	A6	740199
Resistin	B7	740208
TNF-α	B9	740209
<b>Required Mix and Match</b>	Components (already included in Pre	e-defined Panel)
Standard		Cat. No. 740210
Detection Antibodies		Cat. No. 740211
Buffer Set 3 (includes Filter P	late)	Cat. No. 740215

\*The Human Adipokine panel is not suitable for serum/plasma samples due to different sample dilution requirements for different analytes. If you need to measure serum/plasma samples for these analytes, please use Human Metabolic Panel 1 and Human Inflammation panel."

### Human CD8/NK Cell Panel (Includes Filter Plate)

Pre-defined Panel Cat. No. 7402 Beads and all required compon	Mix & Match Capture Bead Cat. No.	
Target	Bead ID	
Granulysin	B9	740280
Granzyme A	B5	740277
Granzyme B	B6	740278
sFas	B2	740274
sFasL	B3	740275
IFN-γ	B4	740276
IL-2	A4	740268
IL-4	A5	740269
IL-6	A7	740044
IL-10	A6	740270
IL-17A	A8	740272
Perforin	B7	740279
TNF-α	A10	740273
<b>Required Mix and Match Compo</b>	efined Panel)	
Standard		Cat. No. 740281
Detection Antibodies		Cat. No. 740282
Buffer Set (includes Filter Plate)		Cat. No. 740075

### Human/NHP Free Active/Total TGF-β1 Panel\*

Pre-defined Panels include ALL require targets	Mix & Match Capture Bead Cat. No.		
Filter Plate			
V-bottom Plate			
Target	Bead ID		
TGF-β1	A6		740488
<b>Required Mix and Match Components</b>			
Standard			Cat. No. 740486
Detection Antibodies			Cat. No. 740487
Buffer Set E			Cat. No. 740437
Plate Options	Filter Plate: Cat. No. 740377		
			V-bottom Plate: Cat. No. 740379

\* The assay is able to detect free active TGF- $\beta 1$  without sample treatment or total TGF- $\beta 1$  after sample treatment

### Human Metabolic Panel 1 (Includes Filter Plate)

Pre-defined Panel Cat. No. 740 Beads and all required compo	Mix & Match Capture Bead Cat. No.			
Target	Bead ID			
Adiponectin	A4	740197		
Adipsin	A5	740198		
Leptin	B4	740205		
Resistin	B7	740208		
Required Mix and Match Components (already included in Pre-defined Panel)				
Standard		Cat. No. 740213		
Detection Antibodies		Cat. No. 740214		
Buffer Set 4 (includes Filter Plate)		Cat. No. 740216		

#### Human Anti-Virus Response Panel

Pre-defined Panels targets	Mix & Match Capture Bead Cat. No.			
Filter Plate		Cat. No. 740349 Cat. No. 740350		Cat. NO.
V-bottom Plate		Cat. No. 740390	Cat. No. 740396	-
Target	Bead ID	Anti-Virus Response Panel	Type 1/2/3 Interferon Panel	-
CXCL10 (IP-10)	A7	~		740363
GM-CSF	B5	~		740362
IFN-α2	B3	V	<b>v</b>	740351
IFN-β	B6	V	<b>v</b>	740353
IFN-γ	B9	V	<b>v</b>	740352
IFN-λ1	A8	~	<b>v</b>	740354
IFN-λ2/3	B4	V	<b>v</b>	740355
IL-1β	A4	~		740119
IL-6	A5	~		740356
IL-8	A10	~		740357
IL-10	B7	~		740358
IL-12 (p70)	B2	~		740361
TNF-α	A6	v		740359
Required Mix and M	latch Compone	ents (already included	in Pre-defined Panel)	
Standard				Cat. No. 740365
Detection Antibodie	s			Cat. No. 740364
Buffer Set A				Cat. No. 740368
Plate Options				Filter Plate: Cat. No. 740377
				V-bottom Plate: Cat. No. 740379

### Human Apolipoprotein (Apo) Panel

Pre-defined Panels include A targets	Mix & Match Capture Bead Cat. No.					
Filter Plate	Filter Plate Cat. No. 740453					
V-bottom Plate		Cat. No. 740454	-			
Target	Bead ID					
Apo Al	A4		740457			
Apo All	A5		740458			
Apo B100	A6		740459			
Apo CII	A7		740460			
Apo CIII	A10		740461			
Apo D	B3		740462			
Apo E	B4		740463			
Apo E4	B5		740464			
Аро Н	B6		740465			
Аро Ј	B7		740466			
Аро М	B9		740467			
Required Mix and Match Con	nponents (already inclu	ded in Pre-defined Panel)				
Standard			Cat. No. 740455			
Detection Antibodies			Cat. No. 740456			
Buffer Set D	Cat. No. 740375					
Plate Options			Filter Plate: Cat. No. 740377			
			V-bottom Plate: Cat. No. 740379			

### Human Panels

### Human TIMP Panel

Pre-defined Panels include ALL require targets	Mix & Match Capture Bead Cat. No.		
Filter Plate			
V-bottom Plate		Cat. No. 740480	
Target	Bead ID		
TIMP-1	B9		740483
TIMP-2	B7		740484
TIMP-3	A5		740485
<b>Required Mix and Match Components</b>			
Standard			Cat. No. 740841
Detection Antibodies			Cat. No. 740842
Buffer Set C			Cat. No. 740374
Plate Options		Filter Plate: Cat. No. 740377	
			V-bottom Plate: Cat. No. 740379

### Human IGFBP Panel

Pre-defined Panels include ALL required components and ALL check-marked targets			Mix & Match Capture Bead Cat. No.	
Filter Plate	Cat. No.			
V-bottom Plate		Cat. No. 740469		
Target	Bead ID			
IGFALS	B9		740478	
IGFBP-1	B5		740477	
IGFBP-2	B2		740475	
IGFBP-3	A5		740473	
IGFBP-4	B4		740476	
IGFBP-6	A8		740474	
IGFBP-7	A4		740472	
<b>Required Mix and Match Components</b>	(already inc	luded in Pre-defined Panel)		
Standard			Cat. No. 740470	
Detection Antibodies			Cat. No. 740471	
Buffer Set C		-	Cat. No. 740374	
Plate Options			Filter Plate: Cat. No. 740377	
			V-bottom Plate: Cat. No. 740379	

### Human Kidney Function Panel 1, For Urine Samples

Pre-defined Panels include ALL req targets	Mix & Match Capture Bead Cat. No.		
Filter Plate	cut no.		
V-bottom Plate		Cat. No. 740578	
Target	Bead ID		
Albumin	B3		740571
Clusterin	A7		740569
Cystatin C	A6		740568
EGF	A8		740570
IGFBP-7	A4		740472
OPN	B4		740572
TFF3	B7		740573
Uromodulin	B9		740574
β2-microglobulin	A5		740567
<b>Required Mix and Match Compone</b>	nts (already inc	luded in Pre-defined Panel)	
Standard			Cat. No. 740580
Detection Antibodies			Cat. No. 740579
Buffer Set G			Cat. No. 740539
Plate Options			Filter Plate: Cat. No. 740377
			V-bottom Plate: Cat. No. 740379

### Human Kidney Function Panel 2, For Serum/Plasma Samples

Pre-defined Panels include ALL required targets	Mix & Match Capture Bead Cat. No.		
Filter Plate		Cat. No. 740581	cut no.
V-bottom Plate		Cat. No. 740582	
Target	Bead ID		
Cystatin C	A6		740568
IGFBP-7	A4		740472
NGAL	A5		740575
OPN	B4		740572
TFF3	B7		740573
TIMP-2	A8		740576
Uromodulin	B9		740574
<b>Required Mix and Match Componen</b>	nts (already incl	uded in Pre-defined Panel)	
Standard			Cat. No. 740584
Detection Antibodies			Cat. No. 740583
Buffer Set G			Cat. No. 740539
Plate Options			Filter Plate: Cat. No. 740377
			V-bottom Plate: Cat. No. 740379

### Human Kidney Function Panel 3, For Urine/Plasma/Serum Samples

Pre-defined Panels include ALL require targets	Mix & Match Capture Bead Cat. No.		
Filter Plate		Cat. No. 740585	
V-bottom Plate		Cat. No. 740586	
Target	Bead ID		
Cystatin C	A6		740568
IGFBP-7	A4		740472
OPN	B4		740572
TFF3	B7		740573
Uromodulin	B9		740574
<b>Required Mix and Match Components</b>	(already inc	luded in Pre-defined Panel)	
Standard			Cat. No. 740588
Detection Antibodies			Cat. No. 740587
Buffer Set G			Cat. No. 740539
Plate Options			Filter Plate: Cat. No. 740377
			V-bottom Plate: Cat. No. 740379

### Human B Cell Panels

Pre-defined Pan	els include ALL required com	ponents and ALL check-marked	l targets				Mix & Match
Filter Plate		Cat. No. 740526	Cat. No. 740528	Cat. No. 740530	Cat. No. 740532	Cat. No. 740534	Capture Bead Cat. No.
V-bottom Plate		Cat. No. 740527	Cat. No. 740529	Cat. No. 740531 Cat. No. 740533		Cat. No. 740535	
Target	Bead ID	B Cell	B Effector 1 (Be1)	B Effector 2 (Be2)	B Effector 1/2 (Be1/2)	B Cell Activator	
APRIL	B6	V				<b>v</b>	740548
BAFF	B7	<i>v</i>				~	740549
CD40L	B9	v				<ul> <li>✓</li> </ul>	740550
IFN-γ	B3	v	<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>		740545
IL-2	A10	v		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>		740543
IL-4	A6	v		<b>v</b>	<ul> <li>✓</li> </ul>		740540
IL-6	A8	v		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>		740542
IL-10	A7	v					740541
IL-12p70	B5	v	<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>		740547
IL-13	A5	v		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>		740047
IL-17A	B4	v			<ul> <li>✓</li> </ul>		740546
TNF-α	A4	v	v	<b>v</b>	~		740538
TNF-β	B2	v	<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>		740544
<b>Required Mix an</b>	nd Match Components (alread	y included in Pre-defined Pane	I)				
Standard							Cat. No. 740537
Detection Antibodies						Cat. No. 740536	
Buffer Set A1						Cat. No. 740525	
Plate Options						Filter Plate: Cat. No. 740377	
							V-bottom Plate Cat. No. 740379

### Human Vascular Inflammation Panel 1

Pre-defined Pane	Is include ALL required compor	nents and ALL check-marked	targets				Mix & Match
Filter Plate		Cat. No. 740551	Cat. No. 740589	Cat. No. 740591	Cat. No. 740593	Cat. No. 740595	Capture Bead Cat. No.
V-bottom Plate		Cat. No. 740552	Cat. No. 740590	Cat. No. 740592	Cat. No. 740594	Cat. No. 740596	
Target	Bead ID	Tissue Culture	Serum/Plasma	CRP	Urine	Urine	
CRP	A7	V		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>		740558
Cystatin C	B9	V	<b>v</b>			<ul> <li>✓</li> </ul>	740566
ICAM-1	B5	V	<b>v</b>		<ul> <li>✓</li> </ul>		740563
IGFBP-4	B4	V	<b>v</b>		<ul> <li>✓</li> </ul>		740476
MMP-2	A8	V	<b>v</b>		V		740559
MMP-9	B7	V	<b>v</b>		V		740565
MPO	B2	V	<b>v</b>		V		740561
MRP8/14	A5	V	<b>v</b>			V	740556
Myoglobin	A4	V	<b>v</b>		V		740555
NGAL	A6	V	<b>v</b>		V		740557
OPN	A10	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>			<ul> <li>✓</li> </ul>	740560
SAA	B3	v	<b>v</b>		V		740562
VCAM-1	B6	v	<b>v</b>		<ul> <li>✓</li> </ul>		740564
<b>Required Mix and</b>	Match Components (already in	cluded in Pre-defined Pane	)				
Standard							Cat. No. 740554
Detection Antibod	ies						Cat. No. 740553
Buffer Set C						Cat. No. 740374	
Plate Options						Filter Plate: Cat. No. 740377	
							V-bottom Plate Cat. No. 740379



### Human Macrophage/Microglia Panels

Pre-defined Panels	s include ALL required co	omponents and ALL check-marked targets				Mix & Match
Filter Plate		740502	740504	740506	740508	Capture Bead Cat. No.
V-bottom Plate		740503	740505	740507	740509	
Target	Bead ID	Macrophage/Microglia	M1 Macrophage	M2 Macrophage	M1/M2 Macrophage	
Arginase	B2	v		v		740518
CCL17 (TARC)	B3	V		v	v .	740519
CXCL10 (IP-10)	B9	✓ ✓	~		v .	740524
IFN-γ	B7	V	~			740523
IL-1RA	B4	✓ ✓		v .	v .	740520
IL-1β	A10	V	~		v .	740517
IL-4	A7	V		v v		740515
IL-6	A6	V	~	v .	v .	740514
IL-10	A8	V		<ul> <li>✓</li> </ul>	v	740516
IL-12p40	B5	V	~		v .	740521
IL-12p70	A4	V	~		<ul> <li>✓</li> </ul>	740512
IL-23	B6	v	v		v	740522
TNF-α	A5	v	<b>v</b>		v	740513
Required Mix and	Match Components (alre	eady included in Pre-defined Panel)				
Standard						Cat. No. 740511
Detection Antibodies						Cat. No. 740510
Buffer Set A1						Cat. No. 740525
Plate Options						Filter Plate: Cat. No. 740377
						V-bottom Plate Cat. No. 740379



### **Mouse Panels**

### Mouse T Helper Cytokine Panels (Includes Filter Plate; V-bottom plate version coming soon)

Pre-defined Panels include ALL required components and ALL check-marked targets							Mix & Match			
Cat. No.		740005	740025	740027	740029	740031	740035	740037	740039	Capture Beads Cat. No.
Target	Bead ID	Th	Th1	Th2	Th1/Th2	Th17	Th9	Th22	Tfh	
IFN-γ	A4	~	~		~	~				740065
IL-2	A7	v	~		~					740054
IL-4	A10	<ul> <li>✓</li> </ul>		~	~					740055
IL-5	A5	<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>	V					740056
IL-6	A8	V	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	V	<ul> <li>✓</li> </ul>		V	V	740057
IL-9	B3	<ul> <li>✓</li> </ul>					<ul> <li>✓</li> </ul>			740058
IL-10	B2	<ul> <li>✓</li> </ul>	~	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	V	<ul> <li>✓</li> </ul>	740059
IL-13	B9	<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>					740060
IL-17A	B4	<ul> <li>✓</li> </ul>				<ul> <li>✓</li> </ul>				740061
IL-17F	B5	<ul> <li>✓</li> </ul>				<ul> <li>✓</li> </ul>				740062
IL-21	B6	<ul> <li>✓</li> </ul>				V			<ul> <li>✓</li> </ul>	740063
IL-22	B7	<ul> <li>✓</li> </ul>				~		~		740064
TNF-α	A6	~	~	~	~	~	~	~	~	740066
Required Mix a	nd Match Components (	already included in Pi	e-defined Panel)			·				
Standard Ca						Cat. No. 74036	59			
Detection Antibodies Cat. N						Cat. No. 74007	73			
Buffer Set (inclu	des Filter Plate)								Cat. No. 74007	75

### Mouse Cytokine Panel 2 (Includes Filter Plate)

Pre-defined Panel Cat. No. Beads and all required cor	Mix & Match Capture Beads Cat. No.			
Target	Bead ID			
GM-CSF	B7	740146		
IFN-β	B6	740145		
IL-1α	A4	740135		
IL-1β	A5	740136		
IL-3	A6	740137		
IL-7	B2	740141		
IL-11	B3	740142		
IL-12 (p40)	A7	740138		
IL-12 (p70)	A8	740139		
IL-23	A10	740140		
IL-27	B4	740143		
IL-33	B5	740144		
TSLP	B9	740147		
Required Mix and Match Components (already included in Pre-defined Panel)				
Standard	Cat. No. 740372			
Detection Antibodies	Cat. No. 740149			
Buffer Set 2 (includes Filter Pla	te)	Cat. No. 740166		

### Mouse Proinflammatory Chemokine (Includes Filter Plate)

Pre-defined Panel Cat. No. 74 Beads and all required compo	Mix & Match Capture Beads Cat. No.	
Target	Bead ID	
CCL2 (MCP-1)	A10	740089
CCL3 (MIP-1α)	B4	740090
CCL4 (MIP-1β)	B5	740091
CCL5 (RANTES)	A4	740092
CCL11 (Eotaxin)	A6	740093
CCL17 (TARC)	A7	740094
CCL20 (MIP-3a)	A5	740095
CCL22 (MDC)	B9	740098
CXCL1 (KC)	A8	740096
CXCL5 (LIX)	B7	740097
CXCL9 (MIG)	B2	740099
CXCL10 (IP-10)	B3	740100
CXCL13 (BLC)	B6	740101
<b>Required Mix and Match Com</b>	-defined Panel)	
Standard	Cat. No. 740370	
Detection Antibodies	Cat. No. 740074	
Buffer Set (includes Filter Plate)	Cat. No. 740075	



### **Mouse Inflammation Panel**

Pre-defined Panel incl or Filter Plate (Cat. No. required components	Mix & Match Capture Beads Cat. No.	
Target	Bead ID	-
CCL2 (MCP-1)	A8	740155
GM-CSF	B9	740163
IFN-β	B7	740162
IFN-γ	A6	740153
IL-1α	A5	740152
IL-1β	B2	740157
IL-6	B4	740159
IL-10	B3	740158
IL-12 (p70)	A10	740156
IL-17A	B6	740161
IL-23	A4	740151
IL-27	B5	740160
TNF-α	A7	740154
Required Mix and Mate	ch Components (already included in Pre-	defined Panel)
Standard		Cat. No. 740371
Detection Antibodies	Cat. No. 740165	
Buffer Set B	Cat. No. 740373	
Plate Options		Filter Plate: Cat. No. 740377
		V-bottom Plate: Cat. No. 740379

### Mouse/Rat Free Active/Total TGF- $\beta$ 1 Panel\*

Pre-defined Panel includes eith or Filter Plate (Cat. No. 740489), required components	Mix & Match Capture Beads Cat. No.			
Target	Target Bead ID			
TGF-β1	TGF-β1 A6			
Required Mix and Match Compo	efined Panel)			
Standard		Cat. No. 740486		
Detection Antibodies		Cat. No. 740487		
Buffer Set F	Cat. No. 740491			
Plate Options	Filter Plate: Cat. No. 740377			
		V-bottom Plate: Cat. No. 740379		

\* The assay is able to detect free active TGF- $\beta 1$  without sample treatment or total TGF- $\beta 1$  after sample treatment

### Mouse Immunoglobulin Isotyping Panel

Pre-defined Panel incl or Filter Plate (Cat. No. required components	Mix & Match Capture Beads Cat. No.	
Target	Bead ID	
lgG1	A4	740496
lgG2a	A5	740497
lgG3	A7	740499
lgA	B2	740500
IgM	B3	740501
lgG2b	B4	740498
<b>Required Mix and Mate</b>	ch Components (already included in Pre-	defined Panel)
Standard		Cat. No. 740494
Detection Antibodies	Cat. No. 740495	
Buffer Set D	Cat. No. 740375	
Plate Options	Filter Plate: Cat. No. 740377	
		V-bottom Plate: Cat. No. 740379

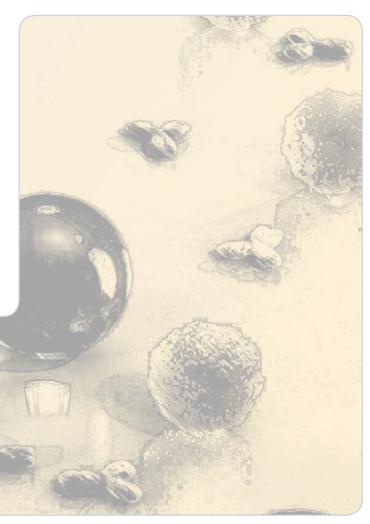


### Rat Thelper Cytokine Panels (Includes either Filter Plate or V-bottom plate)

Pre-defined Panels include ALL required components and ALL check-marked targets						Mix & Match					
Filter Plate Cat. No.		740283	740284	740285	740286	740287	740288	740289	740290	740291	Capture Beads Cat. No.
V-bottom Plate Cat. No.		740402	740403	740404	740405	740406	740407	740408	740409	740410	
Target	Bead ID	Th	Th1	Th2	Th1/Th2	Th17	Th9	Th22	Tfh	ThGM	7
GM-CSF	A10	~	<ul> <li>✓</li> </ul>	~	<ul> <li>✓</li> </ul>	~				~	740257
IFN-γ	A5	~	<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>			<ul> <li>✓</li> </ul>	V	740253
IL-2	A7	~	<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>					<ul> <li>✓</li> </ul>	740295
IL-4	B2	~		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>				V		740297
IL-5	A6	~		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>						740294
IL-6	B9	~	~	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>		740264
IL-9	B4	~					<ul> <li>✓</li> </ul>				740299
IL-10	A4	~	~	<ul> <li>✓</li> </ul>	740252						
IL-13	B6	~		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>			<ul> <li>✓</li> </ul>			740300
IL-17A	B5	~				<ul> <li>✓</li> </ul>					740261
IL-17F	B3	~				<b>v</b>					740298
IL-22	B7	~				~		~			740301
TNF-α	A8	~	~	~	~	~	~	~	~		740256
Required Mix and	Match Compo	nents (already ir	ncluded in Pre-de	fined Panels)							
Standard								Cat. No. 74029	3		
Detection Antibodies								Cat. No. 740292			
Buffer Set B								Cat. No. 74037	3		
Plate Options							Filter Plate: Cat	. No. 740377			
										V-bottom Plate	e:Cat. No. 740379

### **Rat Inflammation Panel**

Pre-defined Panel includes eith or Filter Plate (Cat. No. 740251) required components	Mix & Match Capture Beads Cat. No.			
Target	Bead ID			
CCL2 (MCP-1)	A7	740255		
CXCL1 (KC)	A6	740254		
GM-CSF	A10	740257		
IFN-γ	A5	740253		
IL-1α	B7	740263		
IL-1β	B4	740260		
IL-6	B9	740264		
IL-10	A4	740252		
IL-12 p70	B3	740259		
IL-17A	B5	740261		
IL-18	B2	740258		
IL-33	B6	740262		
TNF-α	A8	740256		
Required Mix and Match Comp	onents (already included in Pre-d	efined Panel)		
Standard		Cat. No. 740265		
Detection Antibodies	Cat. No. 740266			
Buffer Set B	Cat. No. 740373			
Plate Options		Filter Plate: Cat. No. 740377		
		V-bottom Plate: Cat. No. 740379		



### Non-Human Primate T Helper Cytokine Panels (Includes either Filter Plate or V-bottom plate)

Pre-defined Panels include ALL required components and ALL check-marked targets						Mix & Match			
Filter Plate Cat. No.		740303	740381	740382	740383	740384	740385	Capture Beads Cat. No.	
V-bottom Plate Cat. No.		740387	740391	740392	740393	740394	740395		
Target	Bead ID	Th	Th1	Th2	Th1/Th2	Th17	Tfh		
IFN-γ	B3	~	~		v	~	v	740310	
IL-2	A4	V	<ul> <li>✓</li> </ul>		V			740304	
IL-4	B4	V		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>		V	740311	
IL-5	A5	V		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>			740305	
IL-6	A6	V	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	V	740306	
IL-10	A7	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li></li> </ul>	<ul> <li>V</li> </ul>	740307	
IL-13	A10	V		V	V			740308	
IL-17A	B5	V				V		740312	
IL-21	B6	V				V	V	740313	
TNF-α	B2	V	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	V	740309	
<b>Required Mix and</b>	Match Components	(already included in Pre-o	lefined Panels)						
Standard							Cat. No. 740314		
Detection Antibodies							Cat. No. 740315		
Buffer Set A							Cat. No. 740368		
Plate Options	Plate Options							Filter Plate: Cat. No. 740377	
								V-bottom Plate:Cat. No. 740379	

### Non-Human Primate Cytokine/Chemokine Panel

Pre-defined Panel include or Filter Plate (Cat. No. 74 required components	Mix & Match Capture Beads Cat. No.		
Target	Bead ID		
CCL2 (MCP-1)	A10	740323	
CCL3 (MIP-1a)	B3	740324	
CCL4 (MIP-1β)	B4	740325	
CCL5 (RANTES)	B5	740326	
CCL11 (Eotaxin)	A6	740320	
CXCL9 (MIG)	B2	740348	
CXCL10 (IP-10)	A7	740321	
CXCL11 (I-TAC)	A8	740322	
IFN-γ	B9	740329	
IL-1β	A4	740318	
IL-6	A5	740319	
IL-8	B6	740327	
TNF-α	B7	740328	
<b>Required Mix and Match</b>	Components (already included in Pre-	defined Panel)	
Standard		Cat. No. 740330	
Detection Antibodies	Cat. No. 740331		
Buffer Set A	Cat. No. 740368		
Plate Options		Filter Plate: Cat. No. 740377	
		V-bottom Plate: Cat. No. 740379	

### Non-Human Primate Inflammation Panel

Pre-defined Panel inclu or Filter Plate (Cat. No. 2 required components	Mix & Match Capture Beads Cat. No.		
Target	Bead ID		
CCL2 (MCP-1)	B9	740345	
CXCL10 (IP-10)	A6	740335	
GM-CSF	B6	740343	
IFN-β	B2	740339	
IFN-γ	B5	740342	
IL-1β	A7	740336	
IL-6	A4	740333	
IL-8	B7	740344	
IL-10	A5	740334	
IL-12 (p40)	A8	740337	
IL-17A	A10	740338	
IL-23	B3	740340	
TNF-α	B4	740341	
<b>Required Mix and Matc</b>	h Components (already included in Pre-	defined Panel)	
Standard		Cat. No. 740346	
Detection Antibodies	Cat. No. 740347		
Buffer Set A	Cat. No. 740368		
Plate Options		Filter Plate: Cat. No. 740377	
		V-bottom Plate: Cat. No. 740379	



#### Non-Human Primate Growth Factor Panel

Pre-defined Panel includes either V-bottom (Cat. No. 740386) or Filter Plate (Cat. No. 740217), all 13 Capture Beads, and all required components		Mix & Match Capture Beads Cat. No.	
Target	rget Bead ID		
Angiopoietin-2	A4	740218	
EGF	A5	740219	
EPO	A6	740220	
FGF-basic	A7	740221	
G-CSF	A8	740222	
GM-CSF	A10	740223	
HGF	B2	740224	
M-CSF	B3	740225	
PDGF-AA	B4	740226	
PDGF-BB	B5	740227	
SCF	B6	740228	
TGF-α	B7	740229	
VEGF	B9	740230	
<b>Required Mix and Match</b>	Components (already included in Pre-	defined Panel)	
Standard		Cat. No. 740231	
Detection Antibodies	Cat. No. 740232		
Buffer Set A	Cat. No. 740368		
Plate Options		Filter Plate: Cat. No. 740377	
		V-bottom Plate: Cat. No. 740379	

#### Non-Human Primate Adipokine Panel\* (Includes Filter Plate)

Pre-defined Panel Cat. N Beads and all required c	Mix & Match Capture Beads Cat. No.		
Target	Bead ID		
Adiponectin	A4	740234	
Adipsin	A5	740235	
CCL2 (MCP-1)	A7	740237	
CXCL10 (IP-10)	A10	740239	
IFN-γ	B6	740243	
IL-1β	A8	740238	
IL-6	B5	740242	
IL-8	B3	740240	
IL-10	B2	740296	
Leptin	B4	740241	
RBP4	A6	740236	
Resistin	B7	740244	
TNF-α	B9	740245	
Required Mix and Match	Components (already included in Pre	-defined Panel)	
Standard	Cat. No. 740246		
Detection Antibodies	Cat. No. 740247		
Buffer Set 3 (includes Filter	Buffer Set 3 (includes Filter Plate)		

\*The NHP Adipokine panel is not suitable for serum/plasma samples due to different sample dilution requirements for different analytes.

### Carboxyl Beads (Unconjugated)

Can't find a LEGENDplex<sup>™</sup> bead for the target you want? Now you can conjugate your own antibodies to our unconjugated carboxyl beads. Bead IDs are provided so you can fit them appropriately into your LEGENDplex<sup>™</sup> panel. If you would like advice regarding the addition of these beads to your panel, talk with us at cst@biolegend.com.

Beads	Cat. No.
A4	740167
A5	740168
A6	740169
A7	740170
A8	740171
A10	740172
B2	740173
B3	740174
B4	740175
B5	740176
B6	740177
B7	740178
В9	740179

### Streptavidin-PE Reporter Reagent

Steptavidin binds to biotin with high affinity. Streptavidin-PE (SA-PE) is useful for detecting biotinylated antibodies. It is used for LEGENDplex<sup>™</sup> assays as a reporter reagent. PE can be excited and emit a signal that is detected by a flow cytometer.

Desc	ription	Cat. No.
SA-P	E	740452

### Request a Custom LEGENDplex<sup>™</sup> panel

Want a LEGENDplex<sup>™</sup> target that you don't see in our listings? Or, do you want to combine cytokines and chemokines across panels? Talk things over with our experts to get your customized project underway.

### E-mail: cst@biolegend.com or call 877-BIOLEGEND to get started!



### **Frequently Asked Questions**

### What is the difference between LEGENDplex<sup>™</sup> and Luminex<sup>®</sup> assays?

LEGENDplex<sup>™</sup> and Luminex<sup>®</sup> are both bead-based multiplex immunoassays that use the basic principles of sandwich immunoassay principles. Both systems use fluorescence-coded beads to achieve multiplexing capability. The major difference is in the data acquisition. LEGENDplex<sup>™</sup> uses common lab flow cytometers for data acquisition, whereas Luminex<sup>®</sup>-based assays have dedicated machines for this purpose. Therefore, one of the advantages is that LEGENDplex<sup>™</sup> can be run on widely available flow cytometers without needing specialized machines. As such, LEGENDplex<sup>™</sup> cannot be run on Luminex<sup>®</sup> machines.

### What flow cytometers can run the LEGENDplex<sup>™</sup> assays?

LEGENDplex<sup>™</sup> assays can be used on most commonly used flow cytometers that can read APC and PE, such as BD FACSCalibur™, BD FACSCanto™, BD FACSCanto™ II, BD LSR I<sup>™</sup>, BD LSR II<sup>™</sup>, BD LSRFortessa<sup>™</sup>, BD FACSAria<sup>™</sup> I, II and III, BD Accuri C6<sup>™</sup>, Beckman Coulter's Gallios<sup>™</sup>, CytoFLEX<sup>™</sup>, and Moflo XDP<sup>™</sup>, Thermo Fisher Scientific's Attune<sup>™</sup>, ACEA Bioscience's NovoCyte<sup>™</sup>, EMD Millipore's Guava EasyCyte<sup>™</sup>. Please refer to the "Materials to be provided by end-user" section of your LEGENDplex<sup>™</sup> manual for details on the requirements of the machines in terms of laser and channel configurations. For other brands of flow cytometers, the end-user needs to make sure that the machine is set up properly before use.

BD FACSCalibur™, BD FACSCanto™, BD FACSCanto™ II, BD LSR II™, BD LSR II™, BD LSRFortessa™, BD FACSAria<sup>™</sup> I, II and III, BD Accuri C6<sup>™</sup>, BD FACSVerse<sup>™</sup> are trademarks of Becton, Dickinson and Company. Gallios™, CytoFLEX™, and Moflo XDP™ are trademarks of Beckman Coulter, Inc. Attune™ NxT is a trademark of Thermo Fisher Scientific Inc.

NovoCyte<sup>™</sup> is a trademark of ACEA Biosciences Inc.

Guava® easyCyte is a registered trademark of Merck Millipore Corporation. MACSQuant® is a registered trademark of Miltenyi Biotec.

# My standard curve is not linear; can I use the non-linear part of the standard curve during analysis?

Yes. It is possible to use the non-linear part of the standard curve for calculation of results. The LEGENDplex<sup>™</sup> data analysis software uses a five-parameter curve-fitting algorithm, which determines the minimum and maximum detection concentrations of each target and reports them. If sample concentrations fall outside of the maximum detectable range, the sample will have to be diluted and reanalyzed.

### When do I need to do instrument compensation?

If a single laser instrument is used for both reporter (FL2 or PE) and classification (FL3), then compensation is needed to resolve the signal spillover from FL2 to FL3, and vice-versa. Even on dual laser instruments, some compensation may be required. Please check your machine for the need for compensation and when required, use the compensation beads provided and follow the Flow Cytometer Setup instructions in the LEGENDplex<sup>™</sup> manual. In addition, adjust the PMT voltages such that there is good bead separation, the bead populations are not out of scale, and the PE signal is appropriately amplified to ensure proper signal sensitivity.

### Is a special software package required for data analysis?

Typically, flow cytometers generate output files in FCS format (e.g. FCS 2.0, 3.0, or 3.1), and in some cases, in list mode file format (LMD). FCS files can be analyzed by different software. Data generated from using LEGENDplex<sup>™</sup> kits can be analyzed using the LEGENDplex<sup>™</sup> data analysis software freely available for downloading at the BioLegend website (**biolegend.com**/ **legendplex/software**). A free-of-charge software license dongle is provided in the kit (required for PC users). The Mac software is available for use with a file license. Please check our website for most updated versions of the software.

# What curve-fitting algorithm can I use for generating my standard curve?

The LEGENDplex<sup>™</sup> data analysis software uses a default five-parameter curve-fitting algorithm, which determines the minimum and maximum detection concentrations of each target and reports them. If the default algorithm does not work for a particular set of data, other curve-fitting methods are available in the options of the software. If sample concentrations fall outside of the maximum detectable range, the sample will have to be diluted and re-analyzed.

### The kit instruction manual says that the kit is validated for serum, plasma, and culture supernatant sample types. Can I also use tissue homogenates with LEGENDplex<sup>™</sup>?

Yes, all of the above sample types may be used with LEGENDplex<sup>™</sup> kits, as long as they are prepared in a manner compatible with immunoassays. For tissue homogenate samples, they should be prepared in a neutral pH buffer containing no denaturing chemicals (*e.g.* SDS, urea, thiourea, cholate, etc.). No ionic and a minimal amount of non-ionic detergents (*e.g.* NP-40) may be used in sample preparation. The tissue/ cell homogenization buffer should not contain excessive ionic strength above physiological concentrations of salts. If possible, the buffer should also contain protease inhibitors. In addition, the samples should be centrifuged to remove particulates.

# After I finish the assays, how long can I wait before reading my samples (beads) on a flow cytometer?

The plate or tubes containing the bead assays can be re-suspended in Wash Buffer, kept overnight at 4°C while being protected from light, and be read the next day. There may be a decrease in signal, but overall, the assay results should not be significantly affected. Storing the samples for extended periods of time is not recommended, as it could lead to further reductions in signal.

# Should I perform the assay with the filter plates or with V-bottom plates?

Filter plates or V-bottom plates have been included in some kits for your convenience. Performing the assay with filter plates is generally recommended. A vacuum filtration unit is required to work with the filter plates. If however, you don't have access to a vacuum manifold, then you can use the V-bottom plates as described in the manual and follow the recommended assay protocols for the type of plates you choose. All plates should be made from low binding polypropylene. Polystyrene ELISA or cell culture plates should not be used.

# If I don't have a vacuum, how do I remove the liquid from my plate?

Do NOT invert the plate to dump the liquid. The beads will not adhere to the plate. After centrifugation using a swing bucket rotor with a plate adaptor, you can remove the liquid by using a pipette.

### Contact BioLegend

#### **Customer Service:**

US & Canada Toll-Free: 1.877.246.5343 (877-BIOLEGEND) International: 1.858.768.5800 Fax: 1.877.455.9587 email: cs@biolegend.com

#### **Technical Service:**

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For complete worldwide ordering details, visit: **biolegend.com** 





