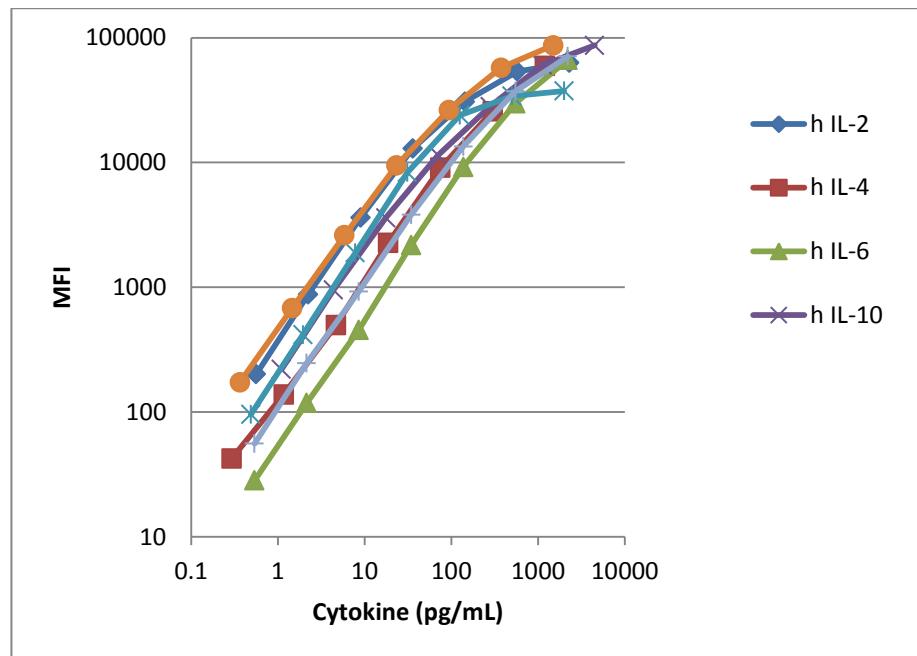




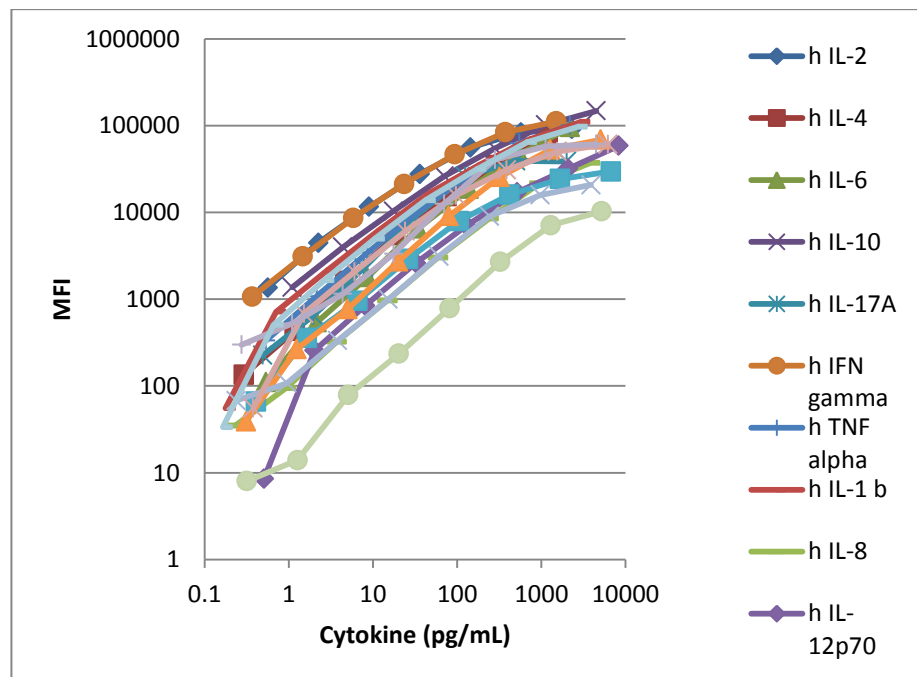


### 3. Assay Performances – Based on Applied BioCode Barcoded Magnetic Bead Multiplexed Technology

#### a. Human Th1/Th2 7-plex Panel Standard Curves



#### b. Human Th1/Th2 17-plex Panel Standard Curves



## c. Human Th1/Th2 7-plex Assay Performance Characteristics

	<b>IL-2</b>	<b>IL-4</b>	<b>IL-6</b>	<b>IL-10</b>	<b>IL-17A</b>	<b>INF-γ</b>	<b>TNF-α</b>
Std Curve Range (pg/ml)	0.6 - 2300	0.3 - 1200	0.5 - 2200	1.1 - 4500	0.5 - 2000	0.4 - 1500	0.5 - 2200
Sensitivity -LOD, (pg/mL)	0.4	1.2	1.3	0.5	0.5	0.6	1.5
Specificity (cross reactivity)	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Precision, Intra (%CV)	<20	<15	<15	<15	<20	<15	<15
Precision, Inter (%CV)	<20	<15	<15	<20	<20	<15	<15
Std Curve Recovery	80 – 120%	80 – 120%	80 – 120%	80 – 120%	80 – 120%	80 – 120%	80 – 120%

The Stock Standard concentrations will vary from lot-to-lot; the concentration of each lot is assigned based from their corresponding retention lot.

Specificity: The analytes of the multiplex were assayed individually at 10,000 pg/mL with the Cytokine 7-plex antibody bead kit and all were found to have negligible cross-reactivity.

## 4. Human or Mouse Cytokine Panel Individual Reagents

Individual reagents can be purchased separately. Call Applied BioCode Customer service for more information on pricing and availability.

<b>Reagent Description</b>
Detection Antibody Diluent, 2X
Human or Mouse Standard and Control Mix
Human or Mouse Standard Diluent, 1x
Cell Culture Standard Diluent, 1x
Streptavidin R-phycoerythrin (SAPE), 1x
Assay Buffer, 1X
Wash Buffer, 10X
Detection Buffer, 1X

## 5. Other Assay Panels Available – Human Single-Plex Kits

Applied BioCode's Human Single-plex Kits are developed to maximize flexibility in experimental design allowing the user to pick and choose their own analytes panel; each analyte in a group can be multiplexed together in any combination.

Analytes in different groups may be multiplexed together but may have some cross-reactivity. Specificity of all the assays across different groups was not validated.

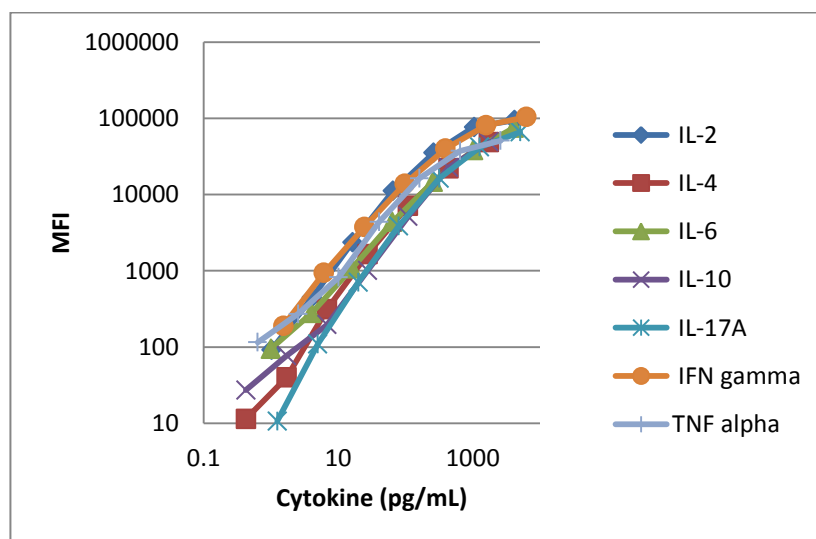
Call Applied BioCode Customer Service for more information on pricing and availability.

<b>#</b>	<b>Single-plex Kit (all the reagents are supplied as ready-to-use)</b>
<b>1</b>	<b>Human Group 1 (17-plex)</b> (Eotaxin/CCL11, IFN gamma, IL-1beta, IL-1RA, IL-2, IL-4, IL-6, IL-8/CXCL8, IL-10/CSIF, IL-12p70, IL-17A/CTLA-8, IL-22/IL-TIF, IP-10/CXCL10, MCP-1/JE/CCL2, MCP-3/MARC/CCL7, RANTES/CCL5, TNF alpha)
<b>2</b>	<b>Human Group 2 (20-plex)</b> (G-CSF/CSF-3, GM-CSF/CSF-2, IFN-alpha 2, IL-1alpha/IL-1F1, IL-3, IL-5, IL-7, IL-11, IL-12/IL-23p40, IL-13, IL-17F, IL-20/IL-10D, IL-21, IL-28A/IFN-lambda 2, IL-29/IFN-lambda 1, IL-33, M-CSF, MPO, TSLP, VEGF-A)

3	<b>Human Group 3 (20-plex)</b> (Fractalkine/CX3CL1, IL-9, IL-15, IL-16/LCF, IL-17C, IL-23, IL-24, IL-25/IL-17E, IL-27, IL-31, IL-34, I-TAC/CXCL11, LIF, MIP-1alpha/CCL3, MIP-1 beta/CCL4, SM/Oncostatin M, SCF/MGF/KITLG, TIM-1/KIM-1/HAVCR, TNF-beta/TNFSF1/LTA, VEGF-D)
4	<b>Human Group 4 (19-plex)</b> (ANGPT-1/Angiopoietin-1, BDNF, beta-NGF/NGFB, EGF, EPO/Erythropoietin, FGF basic/FGF-2/HBGH-2/Prostatropin, GASP-1/WFIKKRNP, HGF/Hepatopoietin A, IFN beta, Insulin, Leptin/LEP, MIF, OPG/Osteoprotegerin/TNFRSF11B, OPN/Osteopontin, PDGF-AB, Resistin/ADSF, Survivin/BIRC5, TGFalpha/TGF-type I/ETGF, TPO/Thrombopoietin)
5	<b>Human Group 5 (19-plex)</b> (CD14/sCD14, CD105/Endoglin, CD106/sVCAM-1/sCD106, CD120a/sTNFR1/TNFRSF1A, CD137/s4-1BB/TNFRSF9, CD153/CD30 Ligand/sCD30L/TNFSF8, CD154/CD40L/sCD40L, CD178/sFas Ligand/TNFSF6/sCD95L, CD25/IL-2RA/sCD25, CD254/sRANKL/TNFSF11/TRANCE, CD256/APRIL/TNFSF13, CD257/BlyS/BAFF/TNFSF13B, CD258/sLIGHT/TNFSF14, CD263/sTRAIL-R3/DcR1/TRID/TNFRSF10c, CD309/sVEGFR2/KDR/Flk-1, CD31/sPECAM-1, CD324/sE-Cadherin/CDH1, CD54/sICAM-1, CD62E/sE-selectin/ELAM1)
6	<b>Human Group 6 (20-plex)</b> (6CKine/CCL21, BCA-1/CXCL13, BRAK/CXCL14, CCL28, CTACK/CCL27, CXCL16, ENA-78/CXCL5, Eotaxin-2/CCL24/MPIF-2, CD121b/IL-1RII/sCD121b, CD126/IL-6Rα/IL-6R alpha/sCD126, CD130/Gp130/sCD130, CD30/TNFRSF8/sCD30, CD120b/TNFR1/TNFRSF1B/sCD120b, MCP-4/CCL13/SCYA13, IGFBP-1, IGFBP-7, MDC/CCL22/SCYA22, MIP-1δ/CCL15/SCYA15, MIP-3α/CCL20, MIP-3β/CCL19/SCYA19)
7	<b>Human Group 7 (14-plex)</b> (Eotaxin-3/CCL26, GCP-2/CXCL6, GROα/CXCL1/MGSA, HCC-1/CCL14, HCC-4/CCL16, I-309/CCL1, MCP-2/CCL8/SCYA8, MPIF-1/CCL23, NAP-2/CXCL7, PARC/CCL18, PF4/CXCL4, SDF-1/CXCL12, TARC/CCL17, TECK/CCL25)
8	<b>Human Group 8 (18-plex)</b> (BMP-2, BMP-4, Cystatin C, FGF-1/FGF-acidic, FGF-19, Flt-3 Ligand/Flt-3L/Flk-2L, GDF-15/MIC-1/PTGFB/PLAB/PDF/NAG-1, Granzyme B, IGFBP-3, IGFBP-5, IGFBP-6, Lipocalin-2/NGAL, PAPP-A, RAGE/AGER/sRAGE, SLPI/ALP/BLPI/CUSI/HUSI-1/MPI, ST2/IL-1R4/IL-1RL1/IL-33R, TIMP-1, TIMP-2)
9	<b>Human Group 9 (7-plex)</b> Adiponectin, LL-37, IGFBP-2, AFP/Alpha-Fetoprotein, CRP/C-Reactive Protein, TGFβ1, MIG/CXCL9

## 6. Assay Performances – Based on Applied BioCode Barcoded Magnetic Bead Multiplexed Technology

### a. Mouse Th1/Th2 7-plex Panel Standard Curves



## b. Mouse Th1/Th2 7-plex Assay Performance Characteristics

	IL-2	IL-4	IL-6	IL-10	IL-17A	INF- $\gamma$	TNF- $\alpha$
Std Curve Range (pg/ml)	0.6 - 2300	0.3 - 1200	0.5 - 2200	1.1 - 4500	0.5 - 2000	0.4 - 1500	0.5 - 2200
Sensitivity-LOD, (pg/mL)	0.4	1.2	1.3	0.5	0.5	0.6	1.5
Specificity (cross reactivity)	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Precision, Intra (%CV)	<20	<15	<15	<15	<20	<15	<15
Precision, Inter (%CV)	<20	<15	<15	<20	<20	<15	<15
Std Curve Recovery	80 – 120%	80 – 120%	80 – 120%	80 – 120%	80 – 120%	80 – 120%	80 – 120%

The Stock Standard concentrations will vary from lot-to-lot; the concentration of each lot is assigned based from their corresponding retention lot.

Specificity: The analytes of the multiplex were assayed individually at 10,000 pg/mL with the Cytokine 7-plex antibody bead kit and all were found to have negligible cross-reactivity.

## 7. Mouse Premixed Multiplex Kits

Call Applied BioCode Customer service for more information on pricing and availability.

#	Pre-mixed Panels (all the reagents are supplied as ready-to-use)
1	<b>Mouse Th1/Th2/Th17 7-Plex Panel</b> (IFN $\gamma$ , IL-2, IL-4, IL-6, IL-10, IL-17A, TNF $\alpha$ )
2	<b>Mouse Th1/Th2/Th17 10-Plex Panel</b> (GM-CSF, IFN $\gamma$ , IL-1 $\alpha$ , IL-2, IL-4, IL-5, IL-6, IL-10, IL-17A, TNF $\alpha$ )
3	<b>Mouse Th1/Th2/Th17 14-Plex Panel</b> (IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-10, IL-12p70, IL-13, IL-17A, IL-21, IL-22, TNF $\alpha$ )
4	<b>Mouse Th1/Th2/Th17 18-Plex Panel</b> (GM-CSF, IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-10, IL-12p70, IL-13, IL-17A, IL-21, IL-22, IL-23p19, KC, TNF $\alpha$ , TSLP)
5	<b>Mouse Inflammation 8-Plex Panel</b> (IFN $\gamma$ , IL-1 $\alpha$ , IL-6, IL-10, IL-12p70, KC, MCP-1, TNF $\alpha$ )
6	<b>Mouse Inflammation 11-Plex Panel</b> (IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-6, IL-10, IL-12p70, IL-23p19, IP-10, KC, MCP-1, TNF $\alpha$ )
7	<b>Mouse Inflammation 17-Plex Panel</b> (IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-6, IL-9, IL-10, IL-12p70, IL-13, IL-15, IL-23p19, IP-10, KC, MCP-1, MIP-1 $\alpha$ , MIP-1 $\beta$ , RANTES, TNF $\alpha$ )
8	<b>Mouse Chemokine 7-Plex Panel</b> (Eotaxin, KC, MCP-1, MCP-3, MIG, RANTES, IP-10)

## 8. Other Assay Panels Available – Mouse Single-Plex Kits

#	Single-plex Kit (all the reagents are supplied as ready-to-use)
1	<b>Mouse Cytokine/Chemokine Group 1 (16-plex)</b> EOTAXIN, IFN-GAMMA, IL-1 ALPHA/IL-1F1, IL-2, IL-4, IL-6, IL-10, IL-12p70, IL-17A/CTLA-8, IP-10, GRO ALPHA/KC/CINC1/CXCL1, MCP-1/JE/CCL2, MCP-3/MARC/CCL7, MIG/CXCL9, RANTES/CCL5, TNF-ALPHA
2	<b>Mouse Cytokine/Chemokine Group 2 (18-plex)</b> G-CSF/CSF-3, GM-CSF/CSF-2, IL-1beta/IL-1F2, IL-3, IL-5, IL-7, IL-12/IL-23 p40, IL-13, IL-15, IL-17F, IL-21, IL-22, IL-28A/B/IFN-lambda 2/3, M-CSF/CSF-1, MIP-1alpha/CCL3, MIP-1beta/CCL4, OSM/Oncostatin M, TSLP

<b>3</b>	<b>Mouse Group 3 (18-plex)</b> BTC/Betacellulin, CTACK/CCL27, CXCL16, IL-1RA, IL-9, IL-23p19, IL-25/IL-17E, Leptin/LEP, LIF, LIX/GCP2/CXCL5, MCP-5/CCL12, MIP-2/GRO beta/CINC3, MIP-3 $\alpha$ /CCL20, VEGF, CD25/IL-2R $\alpha$ /Ly43/sCD25, CD127/IL-7R/IL-7R $\alpha$ /sCD127, CD254/RANKL/TNFSF11/OPGL/sCD254, CD257/BlyS/BAFF/TNFSF13B/sCD257
<b>4</b>	<b>Mouse Group 4 (18-plex)</b> 6Ckine/CCL21/Exodus-2, Activin A, BLC/CXCL13, BDNF, BRAK/CXCL14/MIP-2 $\gamma$ /BMAC, FGF-1/FGF-acidic/HBGF-1, FGF-2/FGF-basic/HBGF-2, FGF-9/HBGF-9/GAF, HGF/HPTA/SF/LEP, IL-11, IL-20/IL-10D, IL-33/NFHEV/DVS27, MDC/CCL22/ABCD-1/STCP-1, MIP-1 $\gamma$ /CCL9/CCL10/MRP-2/CCF18, MIP-3 $\beta$ /CCL19/ELC, OPG/Osteoprotegerin/TNFRSF11B, TARC/CCL17, TIMP-1
<b>5</b>	<b>Mouse Group 5 (19-plex)</b> CD10/Nephrilysin/sNEP/CALL, A/sCD10, CD14/sCD14, CD27/sTNFRSF7/sCD27, CD54/sICAM-1, CD62E/sE-selectin/ELAM1, CD62L/sL-selectin/LECAM1, CD62P/sP-selectin/LECAM-3, CD105/Endoglin/sCD105, CD106/sVCAM-1, CD119/sIFN $\gamma$ R1/IFN $\gamma$ Ra, CD120a/sTNFRI/TNFRSF1A, CD120b/sTNFRII/TNFRSF1B, CD121a/sIL-1R1, CD153/sCD30L/TNFSF8, CD154/sCD40L/TRAP/TNFSF5, CD266/sTWEAK-R/Fn14/TNFRSF12a, CD309/sVEGFR2/KDR/Fik-1, RAGE/sRAGE/AGER, VEGFR1/Fit-1/sVEGFR1
<b>6</b>	<b>Mouse Group 6 (4-plex)</b> TGF $\beta$ 1, CD30/TNFRSF8/sCD30, beta-NGF/NGFB, ANGPT-1/Angioprotien-1

## 9. Rat Assay Panels Available

Applied BioCode's Single-plex Kits are developed to maximize flexibility in experimental design allowing the user to pick and choose their own analytes panel; each analyte in a group can be multiplexed together in any combination. Analytes in different groups may be multiplexed together but may have some cross-reactivity. Specificity of all the assays across different groups was not validated.

<b>#</b>	<b>Pre-mixed Panels (all the reagents are supplied as ready-to-use)</b>
<b>1</b>	<b>Rat Th1/Th2/Th17 7-Plex Panel</b> (IFN $\gamma$ , IL-2, IL-4, IL-6, IL-10, IL-17A, TNF $\alpha$ )

<b>#</b>	<b>Single-plex Kit (all the reagents are supplied as ready-to-use)</b>
<b>1</b>	<b>Rat Group 1 (19-plex)</b> Eotaxin/CCL11, G-CSF/CSF-3, GM-CSF/CSF-2, IFN $\gamma$ , GRO alpha/KC/CINC1, IL-1 $\alpha$ /IL-1F1, IL-1 $\beta$ /IL-1F2, IL-2, IL-4, IL-5, IL-6, IL-10, IL-12p70, IL-13, IL-17A/CTLA-8, IP-10/CXCL10, MIP-1 $\alpha$ /CCL3, MIP-2/GRO beta/CINC3, IL-13
<b>2</b>	<b>Rat Group 2 (13-plex)</b> CD254/RANKL/TNFSF11, IL-12p40, IL-15, Leptin, LIX/GCP2/CXCL5, MCP-1/JE/CCL2, MCP-3/MARC/CCL7, beta-NGF/NGFB, RANTES/CCL5, SDF-1/CXCL12, sICAM-1/sCD54, sVCAM-1/sCD106, VEGF
<b>3</b>	<b>Rat Group 3 (3-plex)</b> TGF $\beta$ 1, PDFG-AB, TIMP-1

## 10. Monkey Assay Panels Available

#	Single-plex Kit (all the reagents are supplied as ready-to-use)
1	<b>RHESUS MACAQUE AND CYNOMOLGUS MACAQUES GROUP 1 (17-PLEX)</b> Eotaxin/CCL11, IFN $\gamma$ , IL-1 $\beta$ , IL-1RA, IL-2, IL-4, IL-6, IL-8/CXCL8, IL-10/CSIF, IL-12p70, IL-17A/CTLA-8, IP-10/CXCL10, MIG/CXCL9, MCP-1/JE/CCL2, MCP-3/MARC/CCL7, TNF $\alpha$ , RANTES/CCL5

## 11. Canine Assay Panels Available

#	Single-plex Kit (all the reagents are supplied as ready-to-use)
1	<b>CANINE GROUP 1 (10-PLEX)</b> IFN $\gamma$ , IL-2, IL-6, IL-8/CXCL8, IL-10/CSIF, IL-12p40, IL-17A, MCP-1/JE/CCL2, SCF/MGF/KITLG, TNF $\alpha$

## 12. Non-Human Primate Panels Available

#	Pre-mixed Panels (all the reagents are supplied as ready-to-use)
1	<b>Non-Human Primate Th1/Th2/Th17 7-Plex Panel</b> (IFN $\gamma$ , IL-2, IL-4, IL-6, IL-10, IL-17A, TNF $\alpha$ )
2	<b>Non-Human Primate NHP IGF I and IGF II (2-plex Panel)</b> IGF I and IGF II

#	Single-plex Kit (all the reagents are supplied as ready-to-use)
1	<b>Non Human Primate 1 (6-PLEX)</b> TGF $\beta$ 1, IL-5, TGF $\alpha$ /TGF-type 1/ETGF, FGF basic/FGF-2/HBHG-2, SDF-1, VEGF-A