

Cytokines & Chemokines
Human, Mouse, Rat, Canine, & Monkey
Product Information

Next Generation Multiplexing Technology

Digitally Barcoded Magnetic Beads

Pre-Mixed or Custom Panels

Partial Plates Available – 32 or 96 Test Kits

Just like ELISA, with Direct Imaging

No Lasers, No Flow Cells, No Fluids, No Waste

Up to 40% Lower Prices than Competitive Offerings

1. **Kit Contents** (sufficient amount of reagents to run one 96-well plate)
 - a. Pre-mixed Capture Antibody conjugated on Barcoded Magnetic Beads (BMB)
 - b. Pre-mixed Biotin Detection Antibody Conjugates
 - c. Detection Antibody Diluent
 - d. Standard Mix, lyophilized recombinant proteins
 - e. Standard Diluent
 - f. Streptavidin R-phycoerythrin (SAPE)
 - g. Assay Buffer

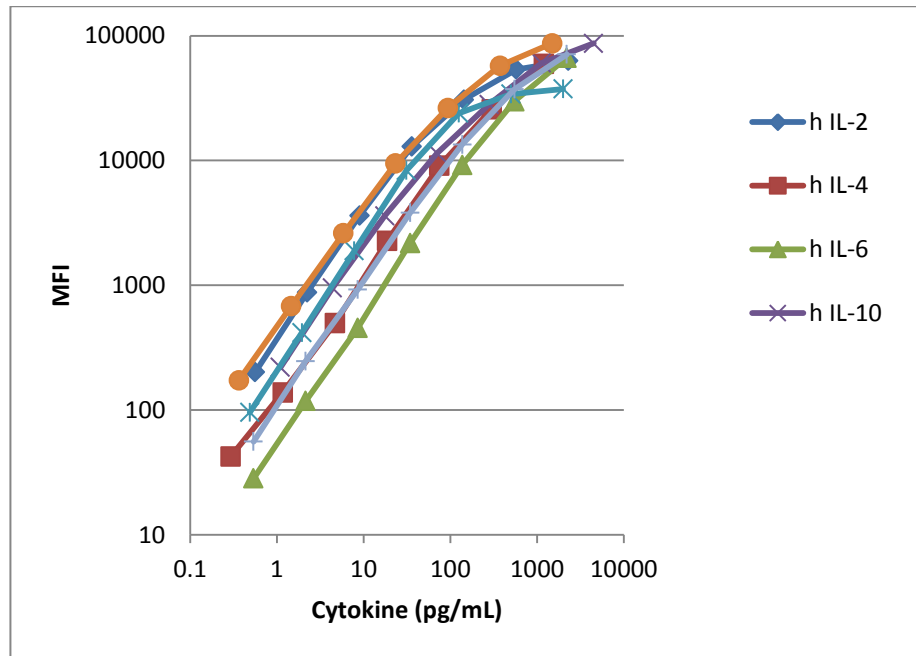
2. Human Premixed Multiplex Kits

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

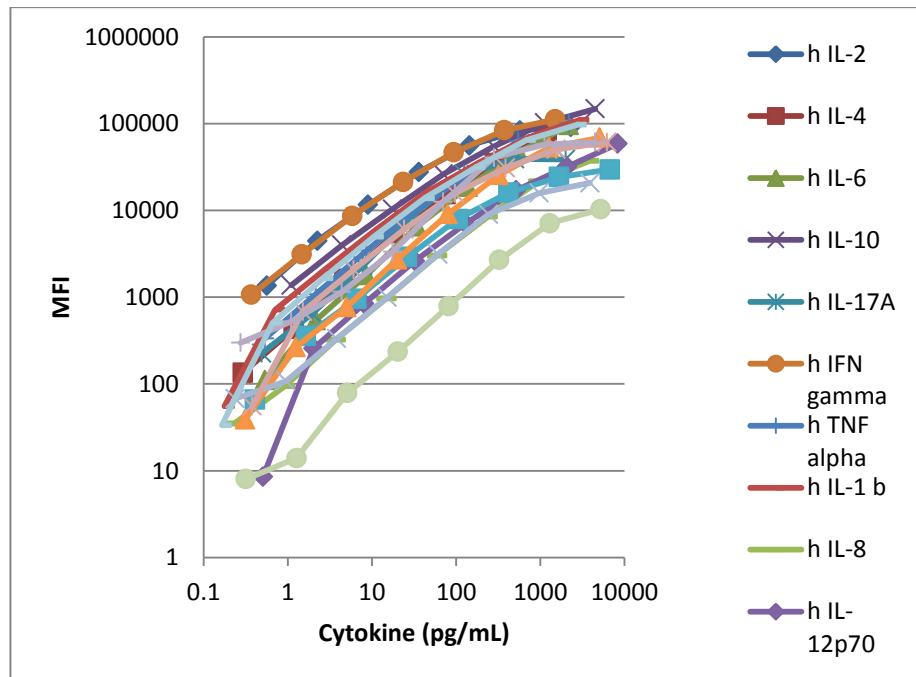
#	Pre-mixed Panels (all the reagents are supplied as ready-to-use)
1	Human Th1/Th2 10-plex Panel (IFN γ , IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, TNF α)
2	Human Th1/Th2/Th17 7-Plex Panel (IFN γ , IL-2, IL-4, IL-6, IL-10, IL-17A, TNF α)
3	Human Th1/Th2/Th17 14-Plex Panel (IFN γ , IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p70, IL-17A, IL-17F, IL-22, TNF α , TNF β)
4	Human Th1/Th2/Th17 17-Plex Panel (GM-CSF, IFN γ , IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-8, IL-9, IL-10, IL-12p70, IL-17A, IL-22, IL-33, TNF α , TNF β , TSLP)
5	Human Inflammation 7-Plex Panel (IL-1 β , IL-1RA, IL-6, IL-8, IL-10, IL-12p70, TNF α)
6	Human Inflammation 11-Plex Panel (IFN γ , IL-1 α , IL-1 β , IL-6, IL-8, IL-10, IL-12p70, IL-27, IP-10, MCP-1, TNF α)
7	Human Inflammation 18-Plex Panel (IFN γ , IL-1 α , IL-1 β , IL-4, IL-6, IL-8, IL-10, IL-12p70, IL-13, IL-17A, IL-27, IL-31, IL-33, IP-10, MCP-1, MIP-1 α , MIP-1 β , and TNF α)
8	Human Chemokine 6-Plex Panel (Eotaxin, IL-8, RANTES, MCP-1, MCP-3, IP-10)
9	Human CD8+ T Cell Related Cytokines, 16-plex Panel (GM-CSF, Granzyme B, IFN γ , IL-2, IL-4, IL-5, IL-6, IL-10, IL-13, IL-15, MIP-1 α , MIP-1 β , RANTES, sCD137, sFasL, TNF α)
10	Human IGF I and IGF II 2-Plex Panel (IGF I and IGFII)

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

	IL-2	IL-4	IL-6	IL-10	IL-17A	INF-γ	TNF-α
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.

Reagent Description
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.

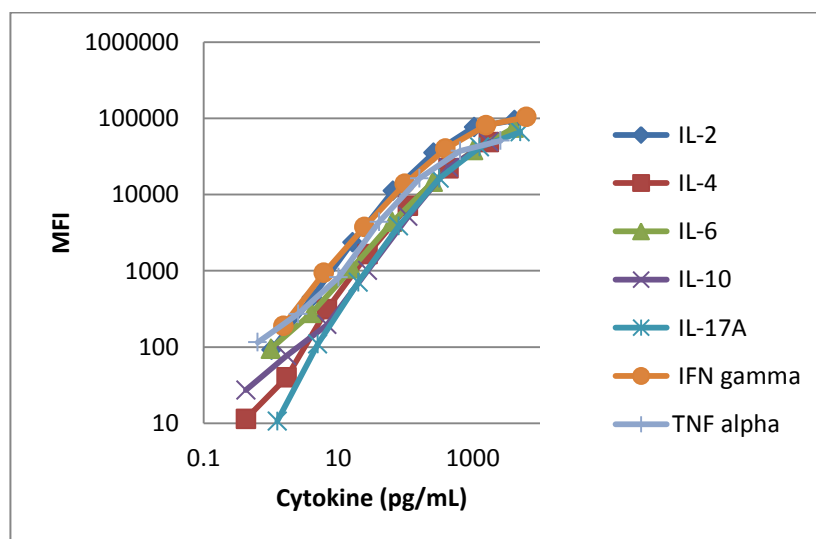
Call Applied BioCode Customer Service for more information on pricing and availability.

#	Single-plex Kit (all the reagents are supplied as ready-to-use)
1	Human Group 1 (17-plex) (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)
2	Human Group 2 (20-plex) (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	Human Group 3 (20-plex) (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	Human Group 4 (19-plex) (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	Human Group 5 (19-plex) (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	Human Group 6 (20-plex) (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/TNFR1I/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	Human Group 7 (14-plex) (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	Human Group 8 (18-plex) (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	Human Group 9 (7-plex) 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- γ	TNF- α
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	Mouse Th1/Th2/Th17 7-Plex Panel (IFN γ , IL-2, IL-4, IL-6, IL-10, IL-17A, TNF α)
2	Mouse Th1/Th2/Th17 10-Plex Panel (GM-CSF, IFN γ , IL-1 α , IL-2, IL-4, IL-5, IL-6, IL-10, IL-17A, TNF α)
3	Mouse Th1/Th2/Th17 14-Plex Panel (IFN γ , IL-1 α , IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-10, IL-12p70, IL-13, IL-17A, IL-21, IL-22, TNF α)
4	Mouse Th1/Th2/Th17 18-Plex Panel (GM-CSF, IFN γ , IL-1 α , IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-10, IL-12p70, IL-13, IL-17A, IL-21, IL-22, IL-23p19, KC, TNF α , TSLP)
5	Mouse Inflammation 8-Plex Panel (IFN γ , IL-1 α , IL-6, IL-10, IL-12p70, KC, MCP-1, TNF α)
6	Mouse Inflammation 11-Plex Panel (IFN γ , IL-1 α , IL-1 β , IL-6, IL-10, IL-12p70, IL-23p19, IP-10, KC, MCP-1, TNF α)
7	Mouse Inflammation 17-Plex Panel (IFN γ , IL-1 α , IL-1 β , IL-6, IL-9, IL-10, IL-12p70, IL-13, IL-15, IL-23p19, IP-10, KC, MCP-1, MIP-1 α , MIP-1 β , RANTES, TNF α)
8	Mouse Chemokine 7-Plex Panel (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	Mouse Cytokine/Chemokine Group 1 (16-plex) 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	Mouse Cytokine/Chemokine Group 2 (18-plex) 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

3	Mouse Group 3 (18-plex) 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 α /CCL20, VEGF, CD25/IL-2R α /Ly43/sCD25, CD127/IL-7R/IL-7R α /sCD127, CD254/RANKL/TNFSF11/OPGL/sCD254, CD257/BlyS/BAFF/TNFSF13B/sCD257
4	Mouse Group 4 (18-plex) 6Ckine/CCL21/Exodus-2, Activin A, BLC/CXCL13, BDNF, BRAK/CXCL14/MIP-2 γ /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 γ /CCL9/CCL10/MRP-2/CCF18, MIP-3 β /CCL19/ELC, OPG/Osteoprotegerin/TNFRSF11B, TARC/CCL17, TIMP-1
5	Mouse Group 5 (19-plex) 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 γ R1/IFN γ 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/Flt-1/sVEGFR1
6	Mouse Group 6 (4-plex) TGF β 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.

#	Pre-mixed Panels (all the reagents are supplied as ready-to-use)
1	Rat Th1/Th2/Th17 7-Plex Panel (IFN γ , IL-2, IL-4, IL-6, IL-10, IL-17A, TNF α)

#	Single-plex Kit (all the reagents are supplied as ready-to-use)
1	Rat Group 1 (19-plex) Eotaxin/CCL11, G-CSF/CSF-3, GM-CSF/CSF-2, IFN γ , GRO alpha/KC/CINC1, IL-1 α /IL-1F1, IL-1 β /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 α /CCL3, MIP-2/GRO beta/CINC3, IL-13
2	Rat Group 2 (13-plex) 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
3	Rat Group 3 (3-plex) TGF β 1, PDGF-AB, TIMP-1

10. Monkey Assay Panels Available

#	Single-plex Kit (all the reagents are supplied as ready-to-use)
1	RHESUS MACAQUE AND CYNOMOLGUS MACAQUES GROUP 1 (17-PLEX) Eotaxin/CCL11, IFN γ , IL-1 β , 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 α , RANTES/CCL5

11. Canine Assay Panels Available

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

12. Non-Human Primate Panels Available

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

#	Single-plex Kit (all the reagents are supplied as ready-to-use)
1	Non Human Primate 1 (6-PLEX) TGF β 1, IL-5, TGF α /TGF-type 1/ETGF, FGF basic/FGF-2/HBGF-2, SDF-1, VEGF-A