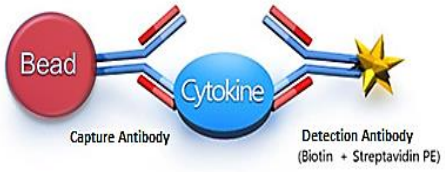
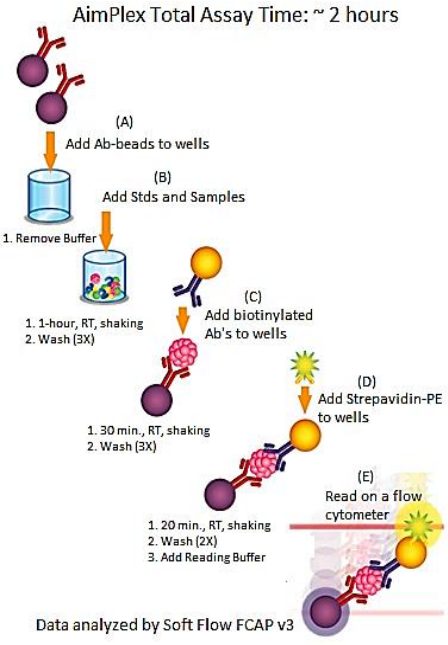
Bead-based Multiplex Immunoassays for Flow

Your Resource for Customized Panels

- Up to 24-Plex
  - 2 bead sizes (S4) and (S5)
  - 12 levels of fluorescence intensity for each bead size
- Works on flow cytometers equipped with a single blue or dual (blue and red) lasers
  - Uses the PE and either PE-Cy5 or APC detectors
  - No need to purchase and maintain another piece of expensive equipment
- Classic "Sandwich" style immunoassay format using capture (cAb) and detection (dAb) antibodies:



Assay Protocol Overview



For research use only.
Not for use in diagnostic procedures.

Benefits

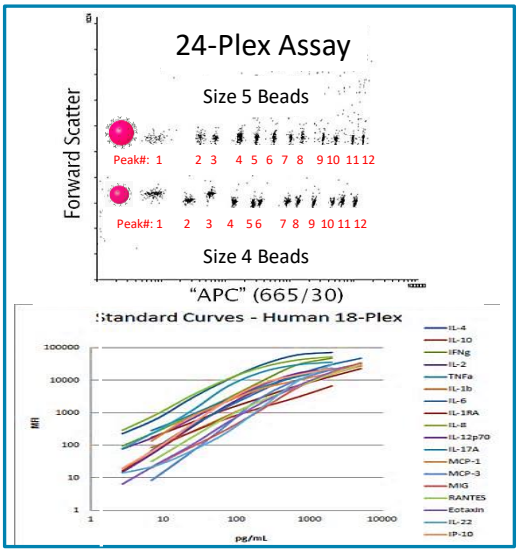
- Multiplexing
  - Less sample needed – only 15 µL!
  - Less assay time and cost
- Consistent and superior assay performance
- Flexible assay panels
  - "Mix and Match" one or more individual analyte from a given Group to create a custom panel for your research
  - Some assays can multiplex across Groups – contact YSL Bio for details
- **More than 400 assays now available**
- Premixed standards and beads are "ready to use" – less pipetting steps
- Available in 32-test and 96-test kits

Assay Specifications

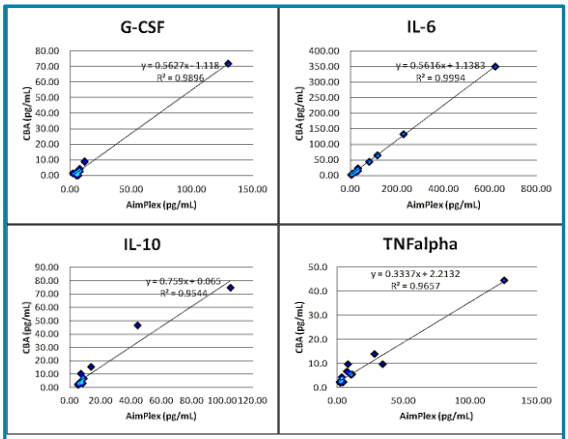
- Sample types: cell culture supernatant, saliva, plasma, cell/tissue lysates, serum, BALF, pleural and peritoneal fluids, and others
- LOD[1]: Majority of the assays < 10 pg/mL
- LLOQ[2]: Majority of the assays < 20 pg/mL
- ULOQ[3]: Majority of the assays > 5,000 pg/mL
- Standard dose recovery: 70-130%
- Intra-assay CV: < 10%; Inter-assay CV: < 20%
- Cross-reactivity of Panel analytes: negligible
- Sample volume: 15 µL

1. LOD: Limit of Detection (Sensitivity)
2. LLOQ: Lower Limit of Quantification (Precision and Accuracy)
3. ULOQ: Upper Limit of Quantification (Precision and Accuracy)

Representative Data

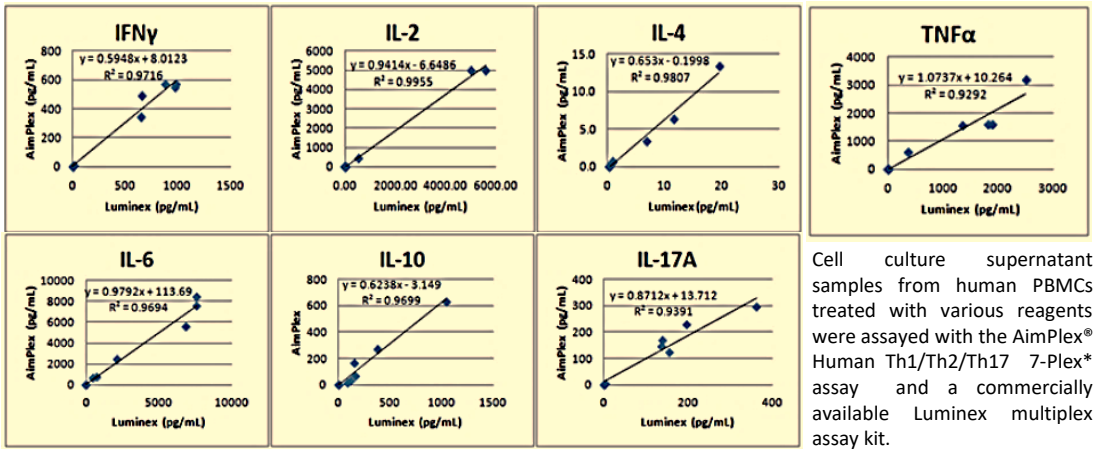


Correlation with CBA™ Assays



Human normal and abnormal serum samples were measured with both AimPlex® and CBA assays and analyzed on a BD FACSCanto II.

Correlation with Luminex™ Assays



Cell culture supernatant samples from human PBMCs treated with various reagents were assayed with the AimPlex® Human Th1/Th2/Th17 7-Plex* assay and a commercially available Luminex multiplex assay kit.

*Assays analyzed on a BD FACSCalibur™, Sony EC800™ or Beckman Coulter CyAn ADP™

Available Assays*

Human

Activin A
Adiponectin
AFP
ALCAM/sCD166
Amphiregulin/AREG
ANGPT-1/Angiopoietin-1
Artemin/ARTN/Neublastin
BDNF
Betacellulin/BTC
β-NGF/NGFB
BIGH3/TGFBI/βIG-H3
BLyS/BAFF/sCD257/TNFSF13B
BMP-2
BMP-4
CA15-3/MUC1
CA19-9
CA125/MUC16
CA50
CCL1/SCYA1/I-309
CCL2/SCYA2/MCP-1
CCL3/SCYA3/MIP-1 α
CCL4/SCYA4/MIP-1 β
CCL5/SCYA5/RANTES
CCL7/SCYA7/MCP-3/MARC
CCL8/SCYA8/MCP-2
CCL11/SCYA12/Eotaxin-1
CCL13/SCYA13/MCP-4
CCL14/SCYA14/HCC-1
CCL15/SCYA15/MIP-1 delta
CCL16/SCYA16/HCC-4
CCL17/SYCA17/TARC
CCL18/SCYA18/PARC
CCL19/SCYA19/MIP-3 β
CCL20/SCYA20/MIP-3 α
CCL21/SCYA21/6Ckine
CCL22/SCYA22/MDC
CCL23/SCYA23/MPIF-1
CCL24/SCYA24/Eotaxin-2
CCL25/SCYA25/TECK
CCL26/SCYA26/Eotaxin-3
CCL27/SCYA27/CTAK
CCL28/SCYA28/MEC
CD14/sCD14
CD163/M130/sCD163
CD354/TREM-1/sCD354
CD73/NT5E/5'-Nucleotidase
CEACAM-1/CD66a
CEA/CEACAM-5/CD66e
CNTF
CRP/C-Reactive Protein
CX3CL1/Fractalkine
CXCL1/MGSA/GROα
CXCL2/GROβ/MIP-2α/GRO2
CXCL4/PF4
CXCL5/SCYB5/ENA78
CXCL6/GCP-3
CXCL7/SCYB7/NAP-3
CXCL9/MIG
CXCL10/IP-10
CXCL11/I-TAC
CXCL12/SDF-1
CXCL13/BCA-1
CXCL14/BRAK
CXCL16/SYCB16
Cystatin C/CST3
E-Cadherin/CDH1/sCD324
EGF
EGFR/ErbB1
EG-VEGF/PROK1/PK1
Elafin
Endoglin/sCD105
Endostatin
EpCAM/MK-1/sCD326
EPO-R
E-selectin/ELAM-1/sCD62E
Ferritin
FGF-1/FGF-acidic/HBGF-1
FGF-2/FGF-basic/HBGH-2
FGF-4
FGF-7/KGF
FGF-9/HBGF-9/GAF
FGF-19
Flt-3 Ligand/Flt-3L/Flk-2L
Follistatin/FST
Galectin-1/Galaptin
Galectin-9
GASP-1/WFIKKNRP
G-CSF/CSF-3
GDF-15/MIC-1/PTGFB
GDNF/ATF-1
GM-CSF/CSF-2
Gp130/sCD130/IL6ST
Granzyme A/GZMA /CTLA3
Granzyme B/GZMB/CTL1
HGF/Hepatopoietin A
ICAM-1/sCD54
ICAM-3/sCD50
IFN-α2
IFN-β
IFN-γ
IgA
IgE
IgG1
IgG2
IgG3
igG4
IGF1
IGF2
IGFBP-1
IGFBP-2
IGFBP-3
IGFBP-4
IGFBP-5
IGFBP-6
IGFBP-7
IL-1 α/IL1A/IL-1F1
IL-1 β/IL1B/IL-1F2
IL-1RA
IL-1R1/sCD121a
IL-1R2/sCD121b
IL-2
IL-2Rα/sCD25
IL-3
IL-4
IL-5
IL-6
IL-6R-α/sCD126
IL-7
IL-8/CXCL8
IL-9
IL-10/CSIF
IL-11
IL-12 (p70)
IL-12/IL-23 (p40)
IL-13
IL-15
IL-16/LCF
IL-17A/CTLA-8
IL-17C
IL-17F
IL-18
IL-19
IL-20/IL-10D
IL-21
IL-22/IL-TIF
IL-23/IL-23p19
IL-24/MDA-7
IL-25/IL-17E
IL-27/IL-27A
IL-28A/IFN-Lambda-2/IFN-λ2
IL-29/IFN-Lambda-1/IFN-λ1
IL-31
IL-32
IL-33/NFNEV/DVS27
IL-34
Insulin
Keratin 19/KRT19/CK-19
Klotho/KLA/KL
LAP(TGF-β1)/Latent TGF-β1
Leptin/LEP
LIF
Lipocalin-2/LCN2/NGAL
L-selectin/LECAM-1/sCD62L
Lymphotactin/XCL1/SCYC1
M-CSF/CSF1
MIA/CD-RAP
Midkine/MK/NEGF2
MIF
MMP-1/CLGN (Total)
MMP-2/Gelatinase A
MMP-3/Stomelysin-1 (Total)
MMP-7/PUMP-1 (Total)
MMP-8/Collagenase 2 (Total)
MMP-9/MANDP2 (Total)
MMP-13/Collagenase 3 (Total)
MPO
NCAM-1/sCD56
NOV/CCN3/IGFBP-9
NRG1-beta1/HRG1-beta1
OPG/Osteoprotegerin
OPN/Osteopontin/BNSP
OSM/Oncostatin M
PAPPA
PD-1/sCD279
PDGF-AA
PDGF-AB
PDGF-BB
PDCD1LG1/PD-L1/sCD274
PDCD1LG2/PD-L2/sCD273
PECAM-1/sCD31
Perforin/PFP/PRF1
PIGF/PIG-F
Pro-BDNF
Procalcitonin/PCT
P-selectin/LECAM-3/sCD62P
RAGE/AGER/sRAGE
Reg3A
Resistin/ADSF
SCF/MGF/KIT-Ligand
SLAMF4/2B4/NAIL/sCD244
SLAMF8/BLAME/sCD353
SLPI
SAA/Serum Amyloid A
ST2/IL-1R4/IL1RL1
Survivin/BIRC5
TGF-alpha/TGF-α/TGFA
TGF-beta 1/TGF-β1/TGFB
THPO/Thrombopoietin/MGDF
TIM-1/HAVCR-1/KIM-1
TIM-3/HAVCR2
TIMP-1/TIMP1
TIMP-2/TIMP2
TL1A/TNFSF15/VEGI
TNF-alpha/TNF-α
TNF-beta/TNF-β/TNFSF1A/LTA
TNFRSF1A/sCD120a/sTNF R1
TNFRSF1B/sCD120b/sTNF R2
TNFRSF5/sCD40
TNFRSF6/sCD95/FasR
TNFRSF7/sCD27
TNFRSF9/sCD137/4-1BB
TNFRSF10C/sCD264/TRAIL-R3
TNFRSF13B/sCD267/TACI
TNFRSF14/sCD270/HVEM
TNFRSF17/BCMA/sCD269
TNFSF5/sCD154/sCD40L
TNFSF6/sCD178/sCD95L/FasL
TNFSF8/sCD153/sCD30L
TNFSF10/sCD253/TRAIL
TNFSF11/sCD254/RANKL
TNFSF12/TWEAK/Apo3 Ligand
TNFSF13/sCD256/APRIL
TNFSF14/sCD258/LIGHT
TSLP
Uteroglobin/CC10/CC16
VCAM-1/sCD106
VEGF-A
VEGF-C
VEGF-D/FIGF
VEGFR1/Flt-1
VEGFR2/Flk-1/sCD309/KDR
VAP-1/AOC3

Mouse

Activin A
ANGPT-1/Angiopoietin-1
BDNF
beta-NGF/NGFB
BLyS/BAFF/sCD257/TNFSF13B
BTC/Betacellulin
CCL2/SYCA2/MCP-1
CCL3/SYCA3/MIP-1 α
CCL4/SCYA4/MIP-1 β
CCL5/SCYA5/RANTES
CCL7/SYCA7/MCP-3/MARC
CCL8/MCP-2
CCL9/CCL10/MRP2/MIP-1γ
CCL11/Eotaxin
CCL12/MCP-5
CCL17/SYCA17/TARC
CCL19/SCYA19/MIP-3 β
CCL20/SCYA20/MIP-3 α
CCL21/Exodus-3/6Ckine
CCL22/MDC/ABCD-1
CCL24/Eotaxin-2/MPIF-2
CCL27/SCYA27/CTAK
CCL28/MEC/CCK-1
CD14/sCD14
CRP/C-Reactive Protein
CX3CL1/FKN/Fractalkine
CXCL1/GRO α/KC
CXCL2/GRO β/MIP2
CXCL4/PF4
CXCL5/SCYB5/ENA78
CXCL9/MIG
CXCL10/IP-10
CXCL13/BCA-1/BLC
CXCL14/BRAK/MIP-2γ
CXCL16/SCYA16/HCC-4
EGF
Endoglin/sCD105
E-selectin/sCD62E
FGF-1/FGF-acidic/HBGF1
FGF-2/FGF-basic/HBGH2
FGF-9/HBGF-9/GAF
G-CSF/CSF-3
GM-CSF/CSF-2
HGF/HPTA/SF
ICAM-1/CD54
IFN-γ
IFN-γ R1/IFNGR1/sCD119
IL-1 alpha/IL-1F1
IL-1 beta/IL-1F2
IL-1RA
IL-1R1/sCD121a
IL-2
IL-2Rα/sCD25
IL-3
IL-4
IL-5
IL-6
IL-7
IL-7R/IL-7Rα/sCD127
IL-9
IL-10/CSIF
IL-11
IL-12/IL-23 p40
IL-12p70
IL-13
IL-15
IL-17A/CTLA-8
IL-17F
IL-20/IL-10D
IL-21
IL-22
IL-23p19
IL-25/IL-17E
IL-28A/IFN-Lambda-2/IFN-λ2
IL-33/NFHEV/DVS27
Leptin/LEP
LIF
L-selectin/sCD62L
M-CSF/CSF-1
Neprilysin/sNEP/sCD10
OPG/Osteoprotegerin
OSM/Oncostatin M
P-selectin/LECAM3/sCD62P
RAGE/sRAGE/AGER
TGF-beta 1/TGF-β1/TGFB
TIMP-1/TIMP1
TNF-alpha/TNF-α
TNFR1/sCD120
TNFR2/sCD120b
TNFRSF7/sCD27
TNFRSF8/sCD30
TNFRSF12A/sCD266/TWEAK-R
TNFSF5/sCD155/sCD40L
TNFSF8/sCD154/sCD30L
TNFSF11/sCD254/RANKL
TPO/Thrombopoietin
TSLP
VCAM-1/sCD106
VEGF
VEGFR1/Flt-1/sVEGFR1
VEGFR2/Flk-1/sCD309/KDR

Rat

BDNF
β-NGF/NGFB
CCL2/SYCA2/MCP-1
CCL3/SYCA3/MIP-1 α
CCL5/SCYA5/RANTES
CCL7/SCYA7/MCP-3
CCL11/Eotaxin
CD154/sCD40L/TRAP/TNFSF5
CD62P/P-selectin/ LECAM-3
CXCL1/Gro α/KC
CXCL2/Gro β/MIP2
CXCL4/PF4
CXCL6/SCYB6/GCP2
CXCL10/IP-10
CXCL12/SDF-1
G-CSF/CSF-3
GM-CSF/CSF-2
ICAM-1/sCD54
IFNγ
IL-1 α/IL-1F1
IL-1 β/IL-1F2
IL-2
IL-4
IL-5
IL-6
IL-10/CSIF
IL-12p40
IL-12p70
IL-13
IL-15
IL-17A/CTLA-8
Leptin
PDGF-AB
TIMP-1
TNF-alpha/TNF-α
TNFSF11/sCD254/RANKL
VCAM-1/sCD106

NHP

β-NGF/NGFB
CCL2/SYCA2/MCP-1
CCL5/RANTES
CCL7/MCP-3/MARC
CCL11/Eotaxin
CXCL9/MIG
CXCL10/IP-10
CXCL12/SDF-1
FGF basic/FGF-2
IFNγ
IL-1β
IL-1RA
IL-2
IL-4
IL-5
IL-6
IL-8/CXCL8
IL-10/CSIF
IL-12p70
IL-17A/CTLA-8
TGF-α/TGF-type I
TNF-α

Canine

IFNγ
IL-2
IL-6
IL-8/CXCL8
IL-10/CSIF
IL-12p40
IL-17A
Insulin
MCP-1/JE/CCL2
SCF/MGF/KITLG
TNFα
VEGF

Sub-Categories

Human: Groups 1 – 10
Mouse: Groups 1 – 5
Rat: Groups 1 and 2
Non-Human Primate: Group 1
Canine: Group 1

AimPlex® Biosciences, Inc.

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