Magnetic Luminex® Performance Assay Human RBP4 Kit

Catalog Number: LHK3378
Pack Size: 100 Tests

SPECIFICATIONS AND USE

Recommended Sample Types
- Serum, EDTA plasma, heparin plasma, and urine.

Microparticle Region
- Region-29

Components
- Microparticle Concentrate (Part 894309) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 894320) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.

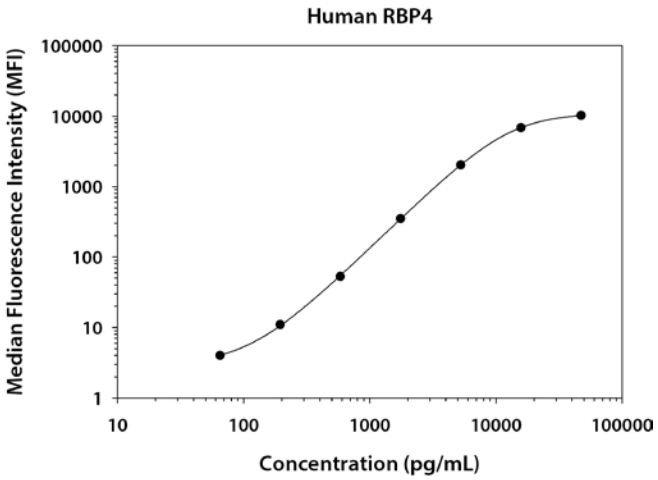
Other Supplies Required
- Magnetic Luminex Performance Assay Human Kidney Biomarker Base Kit (Catalog Number LHK000).

Storage
- Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.
- **Avoid freezing microparticles.**
- **Protect microparticles from light.**

Instructions for Use
- Refer to the Base Kit insert for the Magnetic Luminex Performance Assay procedure.

TYPICAL DATA

This human RBP4 standard curve is provided only for demonstration. A standard curve must be generated each time an assay is run, utilizing values from the Standard Value Card included in the Base Kit.



Standard	pg/mL	MFI	Average	Corrected
Blank	0	26 26	26	——
1	47,400	10,214 10,248	10,231	10,205
2	15,800	6851 6942	6897	6871
3	5267	2034 2066	2050	2024
4	1756	373 380	377	351
5	585	78 79	79	53
6	195	36 37	37	11
7	65	29 30	30	4

PERFORMANCE CHARACTERISTICS

All data were collected with assays run as a multiplex.

Sensitivity - The Minimum Detectable Dose (MDD) was determined by adding two standard deviations to the mean MFI of twenty zero standard replicates and calculating the corresponding concentration.

Thirty-two assays were evaluated, and the MDD of human RBP4 ranged from 21.2-124 pg/mL. The mean MDD was 47.5 pg/mL.

CORRELATION

This assay has been correlated to the respective Quantikine® ELISA kit with a slope of 0.9-1.1 and an R^2 value greater than 0.9.

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Intra-assay Precision (precision within an assay) - Three samples of known concentration were tested twenty times on one plate to assess precision within an assay.
Inter-assay Precision (precision between assays) - Three samples of known concentration were tested in separate assays to assess precision between assays. Assays were performed by at least three technicians using two lots of components.

	Intra-assay Precision				Inter-assay Precision		
Sample	1	2	3		1	2	3
n	20	20	20		67	65	67
Mean (pg/mL)	309	2116	13,990		288	1978	12,875
Standard Deviation	18.7	35.5	555		44.5	174	1102
% CV	6.1	1.7	4.0		15.4	8.8	8.6

Linearity - Samples containing and/or spiked with high concentrations of RBP4 were serially diluted to evaluate assay linearity.

		Serum (n=4)	EDTA plasma (n=4)	Heparin plasma (n=4)	Urine (n=4)
1:2	Average % of Expected	92	93	95	86
	Range (%)	85-100	89-96	92-101	83-92
1:4	Average % of Expected	97	97	97	99
	Range (%)	96-100	95-99	95-98	98-101
1:8	Average % of Expected	99	98	94	103
	Range (%)	96-103	96-103	93-94	102-104

Specificity - This assay recognizes natural and recombinant human RBP4. The assay was tested for cross-reactivity and interference with the following factors. Less than 0.5% cross-reactivity and interference was observed.

Recombinant human:

ApoA1
ApoA2
ApoB
ApoB100
ApoC1
ApoC2
ApoD
ApoE
ApoH
ApoM
Cathepsin A
Cathepsin B
Cathepsin C
Cathepsin D
Cathepsin E
Cathepsin F
Cathepsin L
Cathepsin O
Cathepsin S
Cathepsin V
Cathepsin Z
CCL2/MCP-1
CCL5/RANTES
Cystatin A
Cystatin B
Cystatin E/M
Cystatin F
Cystatin S
Cystatin SA
Cystatin SN
Clusterin-like 1
COX-2
CRP
CXCL1/GROα
CXCL2/GROβ
CXCL3/GROγ
CXCL5/ENA-78
CXCL6/GCP-2
CXCL7/NAP-2
CXCL8/IL-8
CXCL9/MIG
CXCL11/I-TAC
CXCL12/SDF-1
CXCL13/BLC/BCA-1
Enterokinase
Fetuin B
Fibronectin
HAI-1
HAI-2
HGF R/c-MET
HGF Activator
HPRG
IFN-γ
Lipocalin-1
MMP-3
MMP-7
MMP-9
MSP
Plasminogen
Serpin A1
TIM-3
TIM-4
TFF-1
TFF-2
Thrombin

Recombinant mouse:

Clusterin
Cystatin C
CXCL10/IP-10/CRG-2
HGF
Lipocalin-2/NGAL
Osteopontin (OPN)
TIM-1/KIM-1/HAVCR

Recombinant rat:

Clusterin
Fetuin A
TIM-1/KIM-1/HAVCR

Other recombinants:

bovine Osteopontin

Natural human proteins:

α1-Acid Glycoprotein
Kininogen

Recombinant human multiplex partners:

Clusterin
Cystatin C
Lipocalin-2/NGAL
Osteopontin (OPN)
CXCL10/IP-10
HGF
Fetuin A
TFF3
TIM-1/KIM-1/HAVCR

TECHNICAL HINTS

- Protect the microparticles and streptavidin-PE from light at all times.
- Refer to the Base Kit Standard Value Card for reconstitution volume and values of the reconstituted standard.
- Diluted microparticles cannot be stored. Make a fresh dilution of microparticles each time the assay is run.
- The use of a magnetic device made to accommodate a microplate is necessary for washing.
- Discrepancies may exist in values obtained for the same analyte utilizing different technologies.

Luminex Performance Assays afford the user the benefit of multianalyte analysis of biomarkers in a complex sample. A single, multipurpose diluent is used to optimize recovery, linearity, and reproducibility. Such a multipurpose diluent may not optimize any single analyte to the same degree that a unique diluent selected for analysis of that analyte can optimize conditions. Therefore, some performance characteristics may be more variable than those for assays designed specifically for single analyte analysis.