



Magnetic Luminex® Performance Assay Human Lipocalin-2/NGAL Kit

Catalog Number: LHK1757

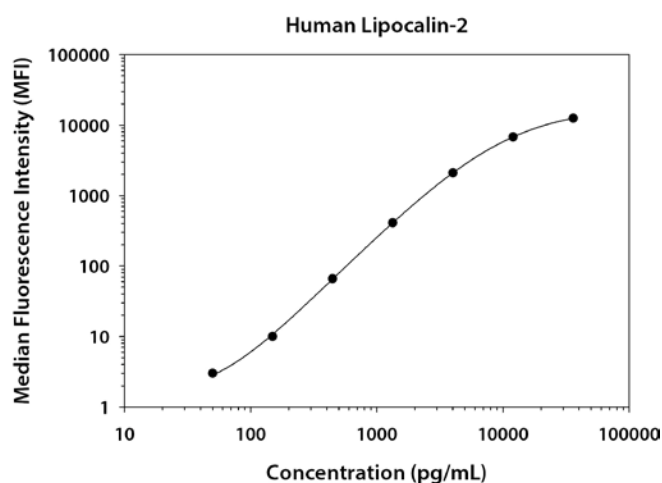
Pack Size: 100 Tests

SPECIFICATIONS AND USE

- Recommended Sample Types**
- Serum, EDTA plasma, heparin plasma, and urine.
- Microparticle Region**
- Region-27
- Components**
- Microparticle Concentrate (Part 894303) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
 - Biotin-Antibody Concentrate (Part 894314) 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 Lipocalin-2 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	21 21	21	—
1	36,100	12,515 12,564	12,540	12,519
2	12,033	6760 6866	6813	6792
3	4011	2109 2131	2120	2099
4	1337	426 438	432	411
5	446	86 88	87	66
6	149	30 31	31	10
7	50	24 24	24	3

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 Lipocalin-2 ranged from 17.0-63.1 pg/mL. The mean MDD was 35.3 pg/mL.

CORRELATION

This assay has been correlated to the respective Quantikine® ELISA kit with a slope of 0.9-1.1 and an R² value greater than 0.9.

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.

R&D Systems, Inc.

1-800-343-7475

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.

Sample	Intra-assay Precision				Inter-assay Precision		
	1	2	3		1	2	3
n	20	20	20		72	70	72
Mean (pg/mL)	213	1417	9164		227	1433	8861
Standard Deviation	8.1	9.9	185		30.8	102	776
% CV	3.8	0.7	2.0		13.6	7.1	8.8

Linearity - Samples containing and/or spiked with high concentrations of Lipocalin-2 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	115	109	104	105
	Range (%)	103-127	105-119	97-114	101-110
1:4	Average % of Expected	102	102	103	108
	Range (%)	98-111	100-106	101-108	100-115
1:8	Average % of Expected	99	104	104	102
	Range (%)	98-100	99-105	103-107	97-107

Specificity - This assay recognizes natural and recombinant human Lipocalin-2. 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:				Recombinant mouse:	Other recombinants:	Recombinant human multiplex partners:
ApoA1	Cathepsin O	CXCL2/GRO β	HPRG	Clusterin	bovine Osteopontin	Clusterin
ApoA2	Cathepsin S	CXCL3/GRO γ	IFN- γ	Cystatin C		Cystatin C
ApoB	Cathepsin V	CXCL5/ENA-78	Lipocalin-1	CXCL10/IP-10/CRG-2	Natural human proteins: α 1-Acid Glycoprotein Kininogen	Osteopontin (OPN)
ApoB100	Cathepsin Z	CXCL6/GCP-2	MMP-3	HGF		CXCL10/IP-10
ApoC1	CCL2/MCP-1	CXCL7/NAP-2	MMP-7	Lipocalin-2/NGAL		HGF
ApoC2	CCL5/RANTES	CXCL8/IL-8	MMP-9	Osteopontin (OPN)		Fetuin A
ApoD	Cystatin A	CXCL9/MIG	MSP	TIM-1/KIM-1/HAVCR		RBP4
ApoE	Cystatin B	CXCL11/I-TAC	Plasminogen			TFF3
ApoH	Cystatin E/M	CXCL12/SDF-1	Serpin A1	Recombinant rat: Clusterin Fetuin A TIM-1/KIM-1/HAVCR		TIM-1/KIM-1/HAVCR
ApoM	Cystatin F	CXCL13/BLC/BCA-1	TIM-3			
Cathepsin A	Cystatin S	Enterokinase	TIM-4			
Cathepsin B	Cystatin SA	Fetuin B	TFF-1			
Cathepsin C	Cystatin SN	Fibronectin	TFF-2			
Cathepsin D	Clusterin-like 1	HAI-1	Thrombin			
Cathepsin E	COX-2	HAI-2				
Cathepsin F	CRP	HGF R/c-MET				
Cathepsin L	CXCL1/GRO α	HGF Activator				

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.