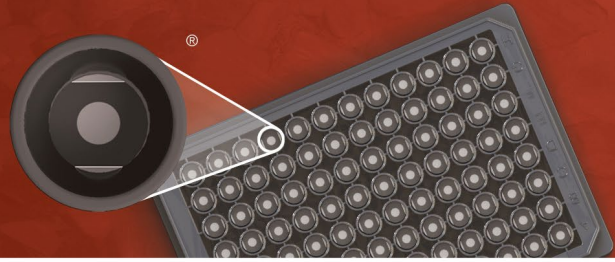
U-PLEX®

Mouse FGF-21



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Ordering Information

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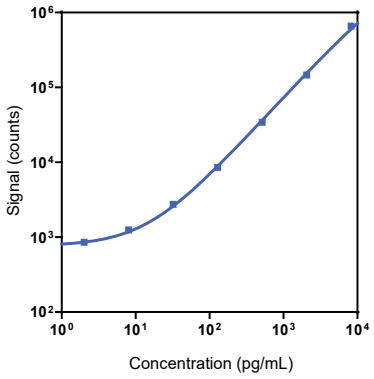
Product Options	Catalog Number	Description
Multiplex	K152ACM, K252ACM	U-PLEX Metabolic Group 1 (mouse) Assay
Singleplex	K1525WK-1/-2/-4	U-PLEX Mouse FGF-21 Assay with SECTOR™ plates
	K1525WK-21/-22/-24	U-PLEX Mouse FGF-21 Assay with QuickPlex Ultra™ plates
	K2525WK-2/-4	U-PLEX Mouse FGF-21 Assay with 384-well plates
Antibody Set	B215W-2/-3	U-PLEX FGF-21 Antibody Set
Protocol	U-PLEX Product Inserts are available at www.mesoscale.com	

The MESO SCALE DISCOVERY® U-PLEX platform was designed to provide ultimate flexibility for detection of biomarkers in a wide variety of sample types. This datasheet provides the representative performance of the U-PLEX® Mouse FGF-21 Assay tested on U-PLEX 96-well SECTOR plates run as a multiplex. The data do not represent the product specifications. Under your experimental conditions, the assay may perform differently from the representative data. U-PLEX assays are offered in either singleplex or multiplex; both are available on 96- or 384-well plates. See a U-PLEX product insert for instrument compatibility.

Representative Calibration Curve and Sensitivity



Assay	Median LLOD (pg/mL)	LLOD Range (pg/mL)
FGF-21	2.8	2.0-3.0

The Calibrator curve was fitted with a 4-parameter logistic model with a $1/Y^2$ weighting. The lower limit of detection (LLOD) is a calculated concentration corresponding to 2.5X the standard deviation above the background (zero Calibrator).

Precision

Control	Average Conc. (pg/mL)	Average Intra-run Conc. (%CV)	Inter-run Conc. (%CV)
High	4,176	2.5	8.7
Mid	846	3.6	10.5
Low	202	4.3	12.1

Controls were made by spiking Calibrator into assay diluent at 3 levels within the quantitative range of the assay. Average intra-run concentration %CV is the average %CV of the control replicates within an individual run. Inter-run concentration %CV is the variability of controls across multiple runs.

MSD® U-PLEX Mouse FGF-21

Tested Samples

Sample Type	Serum (N=10)	EDTA Plasma (N=10)	P800 Plasma (N=9)
Median (pg/mL)	887	978	392
Range (pg/mL)	553–1,810	483–1,060	362–549
% Detected	100	100	100

Normal serum, EDTA plasma, and P800 plasma samples were diluted 4-fold prior to the assay.

Dilution Linearity

Serum			EDTA Plasma			P800 Plasma			Cell Culture Media		
Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
2	106	101–112	2	104	99–113	2	103	98–114	2	107	96–113
8	97	95–99	8	102	96–108	8	102	95–105	8	100	97–103
16	94	89–98	16	102	98–112	16	102	94–109	16	99	96–106

Normal mouse serum, EDTA plasma, P800 plasma, and cell culture media were spiked with Calibrator and tested at different dilutions. Percent recovery at each dilution level was normalized to the dilution-adjusted, 4-fold concentration. Samples may benefit from additional dilution with assay diluent to reduce matrix effects.

% Recovery = (measured concentration / expected concentration) x 100

Spike Recovery

	Serum		EDTA Plasma		P800 Plasma		Cell Culture Media	
Spike Level	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
High	85	80–89	91	87–95	88	82–100	133	107–146
Mid	90	79–96	96	88–100	92	85–109	130	111–152
Low	92	88–97	96	89–99	94	88–101	128	108–152

Normal serum, EDTA plasma, P800 plasma, and cell culture media were spiked with Calibrator at 3 levels. Spiked samples were diluted 4-fold to determine the expected concentration of the analyte. Samples may benefit from additional dilution with assay diluent to reduce matrix effects.

% Recovery = (measured concentration / expected concentration) x 100

Specificity

To assess specificity, the FGF-21/-22/-24 Antibody Set was tested individually against a larger panel of analytes for nonspecific binding (BAFF, BDNF, BCA-1/BLC, CD40, C-Peptide, Desghrelin, Eotaxin, EPO, FGF-21, Ghrelin (octanoylSer3), GLP-1 (7-36), GLP-1 (9-36), Glucagon, GM-CSF, IFN-α, IFN-β, IFN-γ, IL-1β, IL-2, IL-4, IL-5, IL-6, IL-9, IL-10, IL-12/IL-23p40, IL-12p70, IL-13, IL-15, IL-16, IL-17A, IL-17C, IL-17E/IL-25, IL-17F, IL-17A/F, IL-21, IL-22, IL-23, IL-27p28/IL-30, IL-31, IL-33, IP-10, Insulin, KC/GRO, Leptin, MCP-1, MCP-5, MDC, MIP-1α, MIP-1β, MIP-2, MIP-3α, MMP-9 (total), PYY (3-36), RANTES, TARC, TNF-α, VEGF-A). Nonspecific binding was less than 0.5%.

% Nonspecificity = (nonspecific signal / specific signal) x 100

Diluent Compatibility

The data included in this document were collected with Assay Diluent 13 (supplemented with 1,000 KIU/mL Aprotinin [provided] and 100 µM diprotin A [not provided]) and Antibody Diluent 11. MSD offers a range of assay and antibody diluents for separate purchase. Depending on your assay needs, other diluents may be tested. Diprotin A should be purchased separately.

Assay Components

Calibrator: FGF-21 is included in Calibrator 18. The FGF-21 Calibrator is a full length recombinant protein expressed in *E. coli*.
Antibodies: The U-PLEX Mouse FGF-21 Assay uses a goat monoclonal antibody for capture and a goat polyclonal antibody for detection.
Assay generation: A

Note: This datasheet contains representative assay performance data. In custom multiplex formats, the assay may perform differently from the representative data shown.