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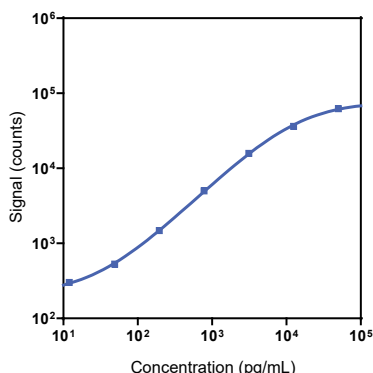
Company Address

MESO SCALE DISCOVERY®
 A division of
 Meso Scale Diagnostics, LLC.
 1601 Research Boulevard
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Product Options	Catalog Number	Description
Multiplex	K153ACL	U-PLEX Metabolic Group 1 (rat)
Singleplex	K1535ZK-1/-2/-4	U-PLEX Rat Leptin Assay with SECTOR™ plates
	K1535ZK-21/-22/-24	U-PLEX Rat Leptin Assay with QuickPlex® plates
Antibody Set	B205Z-2/-3	U-PLEX Rat Leptin Antibody Set
Protocol	U-PLEX® Product Inserts are available at www.mesoscale.com	

The 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 Rat Leptin Assay tested on U-PLEX 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 available in multiplex format with other compatible assays. The same assay can also be used to detect a single analyte using MSD GOLD™ Small Spot Streptavidin SECTOR or MSD GOLD Small Spot Streptavidin QuickPlex plates. See a U-PLEX product insert for instrument compatibility.

Representative Calibration Curve and Sensitivity



Assay	Median LLOD (pg/mL)	LLOD Range (pg/mL)
Leptin	11	7.2-19

The Calibrator curve was fitted with a 4-parameter logistic model with a 1/Y² weighting. The lower limit of detection (LLOD) is a calculated concentration corresponding to 2.5X the standard deviations above the background (zero Calibrator).

Precision

Control	Average Conc. (pg/mL)	Average Intra-run Conc. (%CV)	Inter-run Conc. (%CV)
High	8,890	4.6	8.7
Mid	2,260	3.7	7.2
Low	271	4.8	8.6

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.

For Research Use Only.
 Not for use in diagnostic procedures.

MSD® U-PLEX Rat Leptin

Tested Samples

Sample Type	Serum (N=12)	EDTA Plasma (N=12)	P800 Plasma (N=9)
Median (pg/mL)	2,229	2,252	2,989
Range (pg/mL)	1,189-4,174	1,190-4,090	1,484-5,161
% 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	88	75-112	2	100	76-120	2	81	64-89	2	95	84-106
4	100	NA	4	100	NA	4	100	NA	4	100	NA
8	114	102-127	8	1407	96-114	8	122	108-128	8	97	89-111
16	100	76-115	16	120	90-153	16	127	115-147	16	105	91-113

Normal rat 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

Spike Level	Serum		EDTA Plasma		P800 Plasma		Cell Culture Media	
	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
High	65	56-73	77	47-88	56	34-77	87	81-93
Mid	67	62-70	88	84-94	67	62-73	90	86-96
Low	73	64-84	89	84-94	71	64-80	93	86-102

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 require additional dilution with assay diluent to reduce matrix effects.

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

Specificity

To assess specificity, the Leptin Antibody Set was tested individually against a larger panel of analytes for nonspecific binding (BDNF, C-Peptide, Desghrelin, FGF-21, Ghrelin (octanoylSer3), GLP-1 (7-36), GLP-1 (9-36), Glucagon, Insulin, Leptin, PYY (3-36)). Nonspecific binding was less than 0.5%.

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

Diluent Compatibility

The data included in this document have been collected with Assay Diluent 13 (supplemented with aprotinin and diprotin A) 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: Leptin is included in Calibrator 19. The rat Leptin Calibrator is a full length recombinant protein expressed in *E. coli*.

Antibodies: The U-PLEX Rat Leptin Assay uses a goat polyclonal antibody for capture and a rabbit 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.

