



www.mesoscale.com®

Ordering Information

MSD Customer Service  
Phone: 1-240-314-2795  
Fax: 1-301-990-2776  
Email: CustomerService@mesoscale.com

Scientific Support

Phone: 1-240-314-2798  
Email: ScientificSupport@mesoscale.com

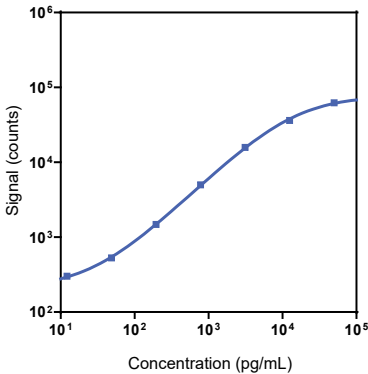
Company Address

Meso Scale Discovery  
A division of  
Meso Scale Diagnostics, LLC.  
1601 Research Boulevard  
Rockville, MD 20850-3173 USA

Product Options	Catalog Number	Description
Multiplex	K152ACM, K252ACM	U-PLEX Metabolic Group 1 (mouse) Assay
	K1525ZK-1/-2/-4	U-PLEX Mouse Leptin Assay with SECTOR™ plates
Singleplex	K1525ZK-21/-22/-24	U-PLEX Mouse Leptin Assay with QuickPlex Ultra™ plates
	K2525K-2/-4	U-PLEX Mouse Leptin Assay with 384-well plates
Antibody Set	B205Z-2/-3	U-PLEX Mouse/Rat Leptin Antibody Set
Protocol	U-PLEX Product Inserts are available at <a href="http://www.mesoscale.com">www.mesoscale.com</a>	

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 Leptin 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)
Leptin	11.6	8.6-12

The Calibrator curve was fitted with a 4-parameter logistic model with a 1/Y<sup>2</sup> 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	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 Mouse Leptin

## Tested Samples

Sample Type	Serum (N=10)	EDTA Plasma (N=10)	P800 Plasma (N=9)
Median (pg/mL)	1,260	950	1,460
Range (pg/mL)	609–3,000	694–1,760	1,260–1,570
% 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	93	88–104	2	94	85–106	2	91	87–99	2	95	84–106
8	110	104–116	8	110	104–115	8	107	100–111	8	97	89–111
16	117	108–133	16	113	101–125	16	111	98–121	16	105	91–113

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.

$$\% \text{ Recovery} = (\text{measured concentration} / \text{expected concentration}) \times 100$$

## 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	80	71–92	85	78–103	73	67–80	87	81–93
Mid	81	75–85	87	84–92	77	76–78	90	86–96
Low	82	76–88	85	82–90	80	77–83	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 benefit from additional dilution with assay diluent to reduce matrix effects.

$$\% \text{ Recovery} = (\text{measured concentration} / \text{expected concentration}) \times 100$$

## Specificity

To assess specificity, the Leptin 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/-22/-24, Ghrelin (octanoylSer3), GLP-1 (7-36), GLP-1 (9-36), Glucagon, GM-CSF, IFN- $\alpha$ , IFN- $\beta$ , IFN- $\gamma$ , IL-1 $\beta$ , 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/-22/-24, IL-22, IL-23, IL-27p28/IL-30, IL-31, IL-33, IP-10, Insulin, KC/GRO, Leptin, MCP-1, MCP-5, MDC, MIP-1 $\alpha$ , MIP-1 $\beta$ , MIP-2, MIP-3 $\alpha$ , MMP-9 (total), PYY (3-36), RANTES, TARC, TNF- $\alpha$ , VEGF-A). Nonspecific binding was less than 0.5%.

$$\% \text{ Nonspecificity} = (\text{nonspecific signal} / \text{specific signal}) \times 100$$

## Diluent Compatibility

The data included in this document were collected with Assay Diluent 13 (supplemented with 1,000 KIU/mL Aprotinin [provided] and 100  $\mu$ M 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:** Leptin is included in Calibrator 19. The Leptin Calibrator is a full length recombinant protein expressed in *E. coli*.

**Antibodies:** The U-PLEX Mouse Leptin Assay uses a mouse monoclonal antibody for capture and a mouse monoclonal 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.

