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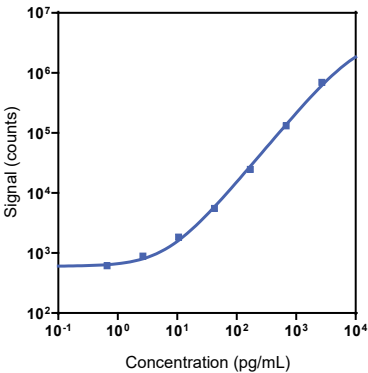
Company Address

Meso Scale Discovery
A division of
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1601 Research Boulevard
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Product Options	Catalog Number	Description
Multiplex	K153ACM, K253ACM	U-PLEX Metabolic Group 1 (rat) Assay
	K1535XK-1/-2/-4	U-PLEX Rat Ghrelin (total) Assay with SECTOR™ plates
Singleplex	K1535XK-21/-22/-24	U-PLEX Rat Ghrelin (total) Assay with QuickPlex Ultra™ plates
	K2535XK-2/-4	U-PLEX Rat Ghrelin (total) Assay with 384-well plates
Antibody Set	B215X-2/-3	U-PLEX Ghrelin (total) 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® Rat Ghrelin (total) 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)
Ghrelin (total)	1.7	1.4-1.9

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 deviation above the background (zero Calibrator).

Precision

Control	Average Conc. (pg/mL)	Average Intra-run Conc. (%CV)	Inter-run Conc. (%CV)
High	1,773	3.2	10.8
Mid	687	3.0	11.6
Low	280	3.0	11.8

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 Ghrelin (total)

Tested Samples

Sample Type	Serum (N=12)	EDTA Plasma (N=12)	P800 Plasma (N=9)
Median (pg/mL)	112	971	775
Range (pg/mL)	27.6–893	262–2,250	320–967
% 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	59	47–68	2	64	39–89	2	74	65–82	2	102	84–114
8	108	98–117	8	124	94–218	8	101	97–105	8	93	90–96
16	97	72–117	16	145	86–365	16	100	94–105	16	95	91–99

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.

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

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	67	47–80	83	73–98	77	72–81	132	120–141
Mid	70	55–82	88	81–100	84	78–90	130	124–133
Low	76	65–84	92	82–100	89	82–98	130	124–134

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 Ghrelin (total) 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%.

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

Octanoylated Ghrelin (Calibrator for Ghrelin (active)) cross-reacts (0.5%) with the Ghrelin (total) assay as expected. We do not recommend multiplexing the Ghrelin (total) and Ghrelin (active) assays on the same plate.

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: Ghrelin (total) is included in Calibrator 18. The Ghrelin (total) Calibrator is a synthetic peptide.

Antibodies: The U-PLEX Rat Ghrelin (total) 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.

