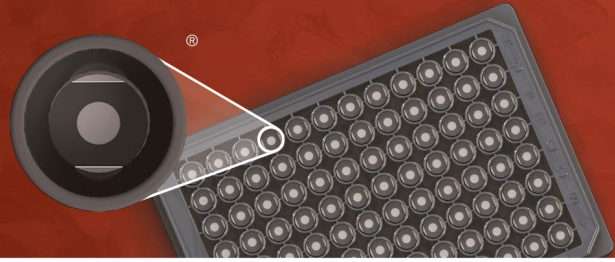
U-PLEX®

Rat Ghrelin (active)



www.mesoscale.com®

Ordering Information

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Company Address

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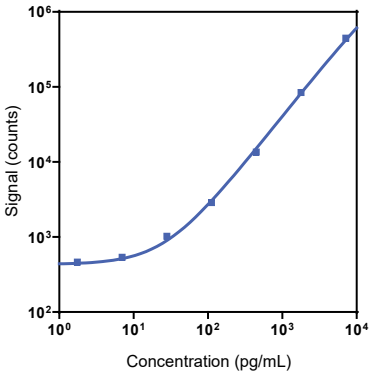
Product Options	Catalog Number	Description
Multiplex	K153ACM, K253ACM	U-PLEX Metabolic Group 1 (rat) Assay
Singleplex	K1536KK-1/-2/-4	U-PLEX Rat Ghrelin (active) Assay with SECTOR™ plates
	K1536KK-21/-22/-24	U-PLEX Rat Ghrelin (active) Assay with QuickPlex® plates
	K2536KK-2/-4	U-PLEX Rat Ghrelin (active) Assay with 384-well plates
Antibody Set	B216K-2/-3	U-PLEX Ghrelin (active) 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 Ghrelin (active) Assay tested on U-PLEX 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 (active)	13	12-29

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	5,197	3.0	12.5
Mid	1,980	2.6	13.7
Low	773	3.6	17.2

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 Rat Ghrelin (active)

Tested Samples

Sample Type	Serum (N=12)	EDTA Plasma (N=12)	P800 Plasma (N=9)
Median (pg/mL)	85.9	NA	63.1
Range (pg/mL)	ND–205	NA	ND–63.1
% Detected	42	0	11

Normal serum, EDTA plasma, and P800 plasma samples were diluted 4-fold prior to the assay. ND = non-detectable (<LLOD). NA = not applicable due to 0% detected.

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	126	115–135	2	93	80–107	2	105	96–114	2	116	52–140
8	91	86–99	8	110	104–122	8	106	103–114	8	106	93–151
16	51	12–98	16	105	93–121	16	118	99–133	16	116	90–191

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

	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	97	82–104	64	41–80	62	49–78	156	150–167
Mid	104	80–112	62	43–73	69	55–85	175	163–183
Low	104	86–112	56	36–80	61	37–89	189	189–189

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 Ghrelin (active) 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

Desghrelin (Calibrator for Ghrelin (total)) cross-reacts (0.5%) with the Ghrelin (active) assay. 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 (active) is included in Ghrelin (active) Calibrator. The Ghrelin (active) Calibrator is a synthetic peptide.
Antibodies: The U-PLEX Rat Ghrelin (active) 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.