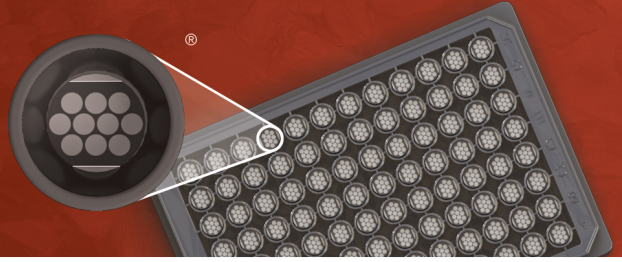
U-PLEX® Human GLP-1 (inactive) Assay



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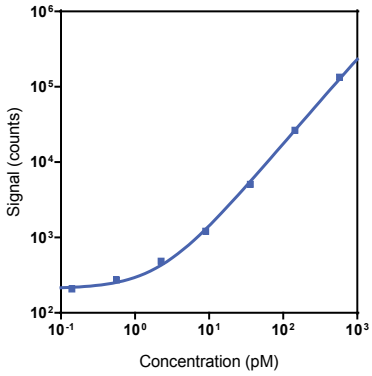
Product Options	Available in: U-PLEX Metabolic Group 1 (hu) K151ACL
	Individual assay: K1515VK provided with Diluent 13 and Diluent 11
	Antibody Set: B215V
Assay Protocol	U-PLEX product inserts are provided with the assays, and are available at www.mesoscale.com/U-PLEX-documents.

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 Human GLP-1 (inactive) Assay tested on U-PLEX plates run as a multiplex. The data were generated during the development of the assay and do not represent the product specifications. Under your experimental conditions and with your specific multiplex, the assay may perform differently than the representative data shown. U-PLEX assays are available in multiplex format with other compatible assays. The same assay can also be used to detect a single analyte on MSD GOLD™ Small Spot Streptavidin plates.

Representative Calibration Curve and Sensitivity



Assay	Median LLOD (pM)	LLOD Range (pM)
GLP-1 (inactive)	1.5	0.55-2.5

The calibration curves used to calculate analyte concentrations were established by fitting the signals from the Calibrators using a 4-parameter logistic (or sigmoidal dose-response) model with a $1/Y^2$ weighting. Analyte concentrations were determined from the electrochemiluminescence signals by back-fitting to the calibration curve. The lower limit of detection (LLOD) is a calculated concentration corresponding to the signal 2.5 standard deviations above the background (zero Calibrator).

Precision

Control	Average Conc. (pM)	Average Intra-run Conc. (%CV)	Inter-run Conc. (%CV)
High	347	5.6	10.2
Mid	132	4.1	12.2
Low	50	4.9	13.9

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 Assays

Tested Samples

Sample Type	Serum (N=12)	EDTA Plasma (N=12)	P800 Plasma (N=8)
Median (pM)	2.1	1.3	2.5
Range (pM)	ND-5.4	ND-2.6	ND-5.5
% Detected	50	25	63

ND = non-detectable (<LLOD). 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	139	112-170	2	134	124-142	2	131	125-134	2	144	129-154
4	100	NA	4	100	NA	4	100	NA	4	100	NA
8	89	82-93	8	89	86-92	8	92	87-96	8	82	74-86
16	85	79-97	16	86	83-90	16	92	86-95	16	79	68-84

Normal human 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 require additional dilution with assay diluent to reduce matrix effects.
% Recovery = (measured concentration / expected concentration) x 100. NA = not applicable.

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	106	92-118	107	100-113	96	91-100	120	113-124
Mid	106	99-118	104	97-111	94	91-95	124	119-133
Low	109	104-117	110	102-121	91	85-95	132	123-145

Normal human 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 GLP-1 (inactive) Antibody Set was tested individually against a larger panel of analytes for nonspecific binding (BAFF, BDNF, β-NGF, C-Peptide, CTACK, ENA-78, Eotaxin, Eotaxin-2, Eotaxin-3, EPO, FGF-21, FGF-23, FLT3L, Fractalkine, FSH, G-CSF, Ghrelin (octanoylSer3), Desghrelin, GIP (1-42), GIP (3-42), GLP-1 (7-36), GLP-1 (9-36), Glucagon, GM-CSF, GRO-α, I-309, IFN-α2a, IFN-β, IFN-γ, IL-1α, IL-1β, IL-1RA, IL-2, IL-2Rα, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-12/IL-23p40, IL-12p70, IL-13, IL-15, IL-16, IL-17A, IL-17A/F, IL-17C, IL-17D, IL-17E/IL-25, IL-17F, IL-18, IL-21, IL-22, IL-23, IL-27, IL-29/IFN-λ1, IL-31, IL-33, Insulin, IP-10, Leptin, LH, MCP-1, MCP-2, MCP-4, M-CSF, MDC, MIF, MIP-1α, MIP-5, PP, Proinsulin (25-110), PYY (3-36), SDF-1α, TARC, TNF-α, TNF-β, TPO, TRAIL, TSLP, VEGF-A, and YKL-40). Nonspecific binding was less than 0.5%. % Nonspecificity = (nonspecific signal / specific signal) x 100.

GLP-1 (inactive) assay will cross-react with the GLP-1 (total) assay. We do not recommend multiplexing the GLP (inactive) assay with the GLP (total) assay on the same plate.

Diluent Compatibility

The data included in this document have been collected with Assay Diluent 13 (supplemented with 1000 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 assay needs, customers may wish to test other diluents.

Assay Components

Calibrator: Human GLP-1 (9-36) is included in Calibrator 13. The human GLP-1 (inactive) Calibrator is a synthetic peptide.
Antibodies: The U-PLEX Human GLP-1 (inactive) 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 than the representative data shown.