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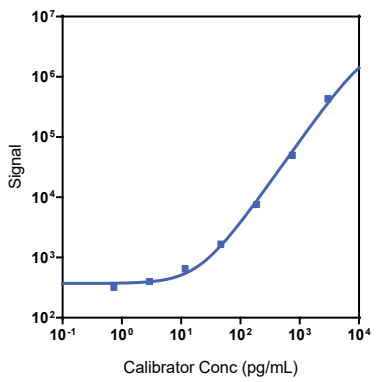
**Company Address**

Meso Scale Discovery  
 A division of  
 Meso Scale Diagnostics, LLC.  
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Product Options	Catalog Number	Description
<b>Multiplex</b>	K15067M, K25067M	U-PLEX Biomarker Group 1 (human)
	K151AEM, K251AEM	U-PLEX Immuno-Oncology Group 1 (human)
	K151ACM, K251ACM	U-PLEX Metabolic Group 1 (human)
<b>Singleplex</b>	K151UYK-1/-2/-4	U-PLEX Human I-309 Assay with SECTOR™ plates
	K151UYK-21/-22/-24	U-PLEX Human I-309 Assay with QuickPlex Ultra™ plates
	K251UYK-2/-4	U-PLEX Human I-309 Assay with 384-well plates
<b>Antibody Set</b>	B21UY-2/-3	U-PLEX Human I-309 Antibody Set
<b>Protocol</b>	U-PLEX Product Inserts are available at <a href="http://www.mesoscale.com">http://www.mesoscale.com</a>	

The MESO SCALE DISCOVERY<sup>®</sup> 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<sup>®</sup> Human I-309 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)
I-309	6.8	6.4-7.7

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 2.5 standard deviations above the background (zero Calibrator).

**Precision**

Control	Average Conc. (pg/mL)	Average Intra-run Conc. (%CV)	Inter-run Conc. (%CV)
High	516	5.8	14.5
Mid	262	6.0	12.5
Low	127	6.1	13.7

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 Human I-309

## Tested Samples

Sample Type	Serum (N=10)	Plasma (N=10)
Median (pg/mL)	8.8	8.0
Range (pg/mL)	ND-11	ND-18
% Detected	70	80

Normal serum and plasma samples were tested without dilution prior to the assay. ND = non-detectable (<LLOD)

## Dilution Linearity

Serum			EDTA Plasma		
Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
2	122	114-130	2	138	133-143
4	150	138-158	4	176	156-189
8	165	148-178	8	216	174-260

Normal human serum and EDTA plasma were spiked with Calibrator and tested at different dilutions. Undiluted samples were tested to determine the expected concentration of the analyte. Samples may benefit from additional dilution with assay diluent to reduce matrix effects.

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

## Spike Recovery

Spike Level	Serum		EDTA Plasma	
	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
High	65	57-68	54	52-59
Mid	72	62-82	69	64-78
Low	92	81-102	85	68-93

Normal serum and plasma were spiked with Calibrator at 3 levels. Undiluted samples were tested 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 I-309 Antibody Set was tested individually against a larger panel of analytes for nonspecific binding (APRIL/TNFSF13, BAFF-R/TNFRSF13C, BCMA/TNFRSF17, BDNF, C-Peptide, CD20, CD27, CD28, CD40L (soluble), CD276/B7-H3, CTACK, CTLA-4, Desghrelin, ENA-78, Eotaxin, Eotaxin-2, Eotaxin-3, EPO, E-Selectin, FGF (basic), FGF-23, FLT3L, Fractalkine, FSH, Galectin-9, G-CSF, GITRL/TNFSF18, GITR/TNFRSF18, Ghrelin (Ser3-octanoylated), gp130 (soluble), GIP (1-42), GIP (3-42), GLP-1 (7-36), GLP-1 (9-36), GM-CSF, Granzyme A, Granzyme B, GRO- $\alpha$ , HAVCR2/TIM-3, HVEM/TNFRSF14, ICOS, ICOS-L/B7-H2, I-309, IFN- $\alpha$ 2a, IFN- $\beta$ , IFN- $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-1RA, IL-2, IL-2R $\alpha$ , 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- $\lambda$ 1, IL-31, IL-33, Insulin, IP-10, LAG3, Leptin, LH, LIGHT/TNFSF14, MCP-1, MCP-2, MCP-4, M-CSF, MDC, MIF, MIG, MIP-1 $\alpha$ , MIP-1 $\beta$ , MIP-5, MMP-1, MMP-2, MMP-7, Nectin-4, OX40/TNFRSF4, PD1, PD-L1, PD-L2, Pentraxin 3, Perforin, PIGF, PP, Proinsulin, proMMP-9, P-Selectin, PYY (3-36), RAGE (soluble), RANKL/TNFSF11, RANTES, S100A12, SDF-1 $\alpha$ , Tie-2, TIGIT, TLR1, TNF- $\alpha$ , TNF- $\beta$ , TNF-RI, TNF-RII, TPO, TRAIL, TSLP, VEGF-A, VEGF-D, VEGFR-1/Flt-1, and YKL-40). Nonspecific binding was less than 2.0%.

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

## Diluent Compatibility

Diluents 57 and 3 are provided with this assay. MSD offers a range of assay and antibody diluents for separate purchase. Depending on your assay needs, other diluents may be tested.

## Assay Components

**Calibrator:** I-309 is included in Calibrator 10 The I-309 Calibrator is a full-length recombinant protein expressed in *E. coli*.

**Antibodies:** The U-PLEX Human I-309 Assay uses a mouse monoclonal antibody for capture and a rabbit polyclonal antibody for detection.

**Assay generation:** B

**Note:** This datasheet contains representative assay performance data. In custom multiplex formats, the assay may perform differently from the representative data shown.

