



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

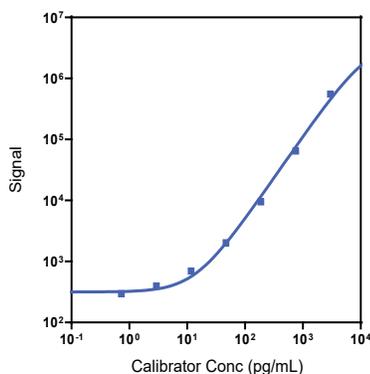
### Company Address

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

Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
	K156UYK-1/-2/-4	U-PLEX NHP I-309 Assay with SECTOR™ plates
	K156UYK-21/-22/-24	U-PLEX NHP I-309 Assay with QuickPlex Ultra™ plates
Singleplex	K256UYK-2/-4	U-PLEX NHP I-309 Assay with 384-well plates
Antibody Set	B21UY-2/-3	U-PLEX Human I-309 Antibody Set
Assay 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® NHP 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 in 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 2.5X the standard deviations above the background (zero Calibrator).

### Precision

	Control	Average Conc. (pg/mL)	Average Intra-run Conc. %CV	Inter-run Conc. %CV
I-309	High	467	5.1	9.3
	Mid	247	5.3	12.1
	Low	115	5.0	12.9

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.

## Spike Recovery

	Spike Level	Serum (N=5)		Plasma (N=5)		Cell Culture Media (N=5)	
		Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
Cynomolgus Monkey	High	64	53-68	49	37-60	53	46-64
	Mid	66	56-73	52	38-66	64	58-71
	Low	67	63-72	46	32-61	78	70-88
Rhesus Monkey	High	53	42-59	52	48-56	53	46-64
	Mid	62	52-73	57	54-60	64	58-71
	Low	56	48-72	66	62-74	78	70-88

Normal serum, EDTA plasma, and cell culture media 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.

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

## Tested Samples

	Sample Type	Serum (N=11)	Plasma (N=11)	Cell Culture Media (N=10)
Cynomolgus Monkey	Median (pg/mL)	31	28	14
	Range (pg/mL)	23-38	19-35	ND-25
	% Detected	100	100	70
Rhesus Monkey	Median (pg/mL)	30	31	19
	Range (pg/mL)	8.1-34	28-45	11-36
	% Detected	100	100	100

Normal serum and plasma samples were diluted 2-fold prior to the assay. ND = not detectable (<LLOD)

## Dilution Linearity

	Fold Dilution	Serum (N=5)			Plasma (N=5)			Cell Culture Media (N=5)		
		Average % Recovery	% Recovery Range		Average % Recovery	% Recovery Range		Average % Recovery	% Recovery Range	
Cynomolgus Monkey	2	120	106-150		165	143-181	2	112	106-124	
	4	142	122-159	4	213	171-226	4	114	100-130	
	8	169	162-182	8	256	198-284	8	119	100-137	
Rhesus Monkey	2	130	121-137	2	126	117-133	2	112	106-124	
	4	162	148-175	4	150	143-156	4	114	100-130	
	8	189	168-210	8	190	173-214	8	119	100-137	

Normal serum, EDTA plasma, and cell culture media 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.

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

# MSD U-PLEX NHP I-309

## Specificity

To assess specificity, the I-309 Antibody Set was tested individually against a larger panel of recombinant human analytes for nonspecific binding (CTACK, Eotaxin, Eotaxin-2, Eotaxin-3, ENA-78, FLT3L, Fractalkine, G-CSF, GM-CSF, GRO- $\alpha$ , I-309, IFN- $\alpha$ 2a, IFN- $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-1RA, IL-2, 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-17AF, IL-17B, IL-17C, IL-17D, IL-17F, IL-18, IL-22, IL-23, IP-10, I-TAC, MCP-1, MCP-2, MCP-3, MCP-4, M-CSF, MDC, MIF, MIP-1 $\alpha$ , MIP-1 $\beta$ , MIP-3 $\alpha$ , MIP-3 $\beta$ , MIP-5, SDF-1 $\alpha$ , TARC, TNF- $\alpha$ , TNF- $\beta$ , TPO, TRAIL, VEGF-A, and YKL-40). Nonspecific binding was less than 0.5%.

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

## 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 full-length recombinant protein is expressed in *E. coli*.

**Antibodies:** The U-PLEX NHP 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 than the representative data shown.

