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## Ordering Information

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## Scientific Support

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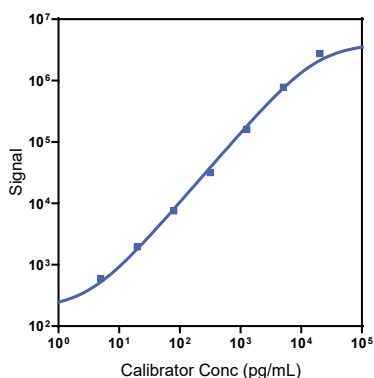
## Company Address

MESO SCALE DISCOVERY®  
A division of  
Meso Scale Diagnostics, LLC.  
1601 Research Boulevard  
Rockville, MD 20850-3173 USA

Product Options	Catalog Number	Description
<b>Multiplex</b>	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
<b>Singleplex</b>	K156VGK-1/-2/-4	U-PLEX NHP G-CSF Assay with SECTOR™ plates
	K156VGK-21	U-PLEX NHP G-CSF Assay with QuickPlex® APT plates
	K256VGK-2/-4	U-PLEX NHP G-CSF Assay with 384-well plates
<b>Antibody Set</b>	B21VG-2/-3	U-PLEX Human G-CSF Antibody Set
<b>Assay Protocol</b>	U-PLEX Product Inserts are available at <a href="http://www.mesoscale.com">www.mesoscale.com</a>	

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 NHP G-CSF 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)
G-CSF	0.72	0.40-1.90

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 deviations above the background (zero Calibrator).

## Precision

	Control	Average Conc. (pg/mL)	Average Intra-run Conc. %CV	Inter-run Conc. %CV
G-CSF	High	10,200	3.3	6.0
	Mid	980	3.3	7.5
	Low	105	3.1	9.1

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	54.7	42-62	55.9	48-64	128	123-132
	Mid	49.2	38-55	50.9	44-61	123	118-125
	Low	49.4	39-55	50.6	44-59	104	100-108
Rhesus Monkey	High	78	68-88	77	69-88	128	123-132
	Mid	73	67-82	69	53-84	123	118-125
	Low	75	69-85	68	58-80	104	100-108

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=10)	Plasma (N=10)	Spiked Serum (N=5)
Cynomolgus Monkey	Median (pg/mL)	NA	NA	270
	Range (pg/mL)	NA	NA	98.8-880
	% Detected	0	0	100
Rhesus Monkey	Median (pg/mL)	ND	NA	119
	Range (pg/mL)	ND-1.20	NA	118-133
	% Detected	10	0	100

Normal serum and plasma samples were diluted 2-fold prior to the assay. ND = not detected (<LLOD); NA = not applicable due to 0% detected

## Dilution Linearity

	Fold Dilution	Serum (N=5)		Fold Dilution	Plasma (N=5)		Fold Dilution	Cell Culture Media (N=5)	
		Average % Recovery	% Recovery Range		Average % Recovery	% Recovery Range		Average % Recovery	% Recovery Range
Cynomolgus Monkey	2	138	130-147	2	128	120-137	2	87	83-91
	4	161	145-186	4	143	130-155	4	75	72-79
	8	173	157-205	8	146	127-166	8	69	65-74
Rhesus Monkey	2	116	111-124	2	120	108-129	2	87	83-91
	4	128	117-141	4	125	103-136	4	75	72-79
	8	131	117-148	8	127	103-145	8	69	65-74

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 G-CSF

## Specificity

To assess specificity, the G-CSF 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:** G-CSF is included in Calibrator 3. The full-length recombinant protein is expressed in *E. coli*.

**Antibodies:** The U-PLEX NHP G-CSF 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.

