NHP G-CSF

Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156VGK-1/-2/-4	U-PLEX NHP G-CSF Assay with SECTOR™ plates
	K156VGK-21/-22/-24	U-PLEX NHP G-CSF Assay with QuickPlex® plates
	K256VGK-2/-4	U-PLEX NHP G-CSF Assay with 384-well plates
Antibody Set	B21VG-2/-3	U-PLEX Human G-CSF Antibody Set
Assay 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 NHP G-CSF Assay tested on U-PLEX 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.

MSD® U-PLEX NHP G-CSF

Spike Recovery

		Serum (N=5)		Plasma (N=5)		Cell Culture Media (N=5)	
	Spike Level	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.

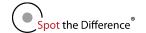% Recovery = (measured concentration / expected concentration) x 100

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 tested without dilution prior to the assay. ND = not detected (<LLOD); NA = not applicable due to 0% detected

Dilution Linearity

		Serum (N=5)		Plasma (N=5)		Cell Culture Media (N=5)	
	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	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.

% Recovery = (measured concentration / expected concentration) x 100

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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-α, I-309, IFN-α2a, IFN-γ, IL-1α, IL-1β, 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-17A/F, 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-1α, MIP-1β, MIP-3α, MIP-3β, MIP-5, SDF-1α, TARC, TNF-α, TNF-β, TPO, TRAIL, VEGF-A, and YKL-40). Nonspecific binding was less than 0.5%.

% Nonspecificity = (nonspecific signal / specific signal) x 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.

For Research Use Only. Not for use in diagnostic procedures.