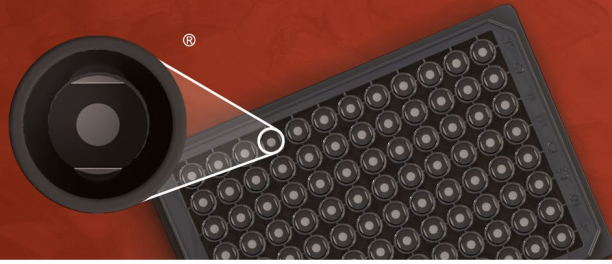
U-PLEX®

NHP MCP-1



www.mesoscale.com®

Ordering Information

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Company Address

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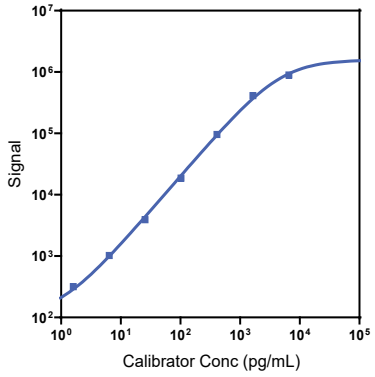
Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156UGK-1/-2/-4	U-PLEX NHP MCP-1 Assay with SECTOR™ plates
	K156UGK-21/-22/-24	U-PLEX NHP MCP-1 Assay with QuickPlex Ultra™ plates
	K256UGK-2/-4	U-PLED NHP MCP-1 Assay with 384-well plates
Antibody Set	B21UG-2/-3	U-PLEX Human MCP-1 Antibody Set
Assay Protocol	U-PLEX Product Inserts are available at www.mesoscale.com	

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 MCP-1 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)
MCP-1	0.37	0.24-0.57

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
MCP-1	High	1,640	5.4	8.7
	Mid	136	2.7	9.1
	Low	14.5	4.4	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.

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	101	88-112	102	93-124	127	112-134
	Mid	95.9	87-101	91.9	81-106	125	108-144
	Low	98.9	88-104	93	85-100	114	92-125
Rhesus Monkey	High	113	108-123	109	103-113	127	112-134
	Mid	101.7	95-108	98.1	94-101	125	108-144
	Low	102.3	96-107	99.4	95-108	114	92-125

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)	132	75.2	1,410
	Range (pg/mL)	45.0-359	32.1-107	179-3,740
	% Detected	100	100	100
Rhesus Monkey	Median (pg/mL)	118	46.7	2,640
	Range (pg/mL)	51.2-163	32.1-64.5	560-5,580
	% Detected	100	100	100

Normal serum and plasma samples were diluted 2-fold prior to the assay.

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	99	95-107	2	101	92-111	2	92	87-102
	4	98	90-110	4	97	88-105	4	83	80-91
	8	94	88-108	8	96	85-103	8	79	74-88
Rhesus Monkey	2	110	104-117	2	93	87-98	2	92	87-102
	4	113	102-119	4	91	87-97	4	83	80-91
	8	111	99-122	8	89	84-95	8	79	74-88

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

Specificity

To assess specificity, the MCP-1 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: MCP-1 is included in Calibrator 2. The full-length recombinant protein is expressed in *E. coli*.
Antibodies: The U-PLEX NHP MCP-1 Assay uses a mouse monoclonal antibody for capture and a mouse monoclonal 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.