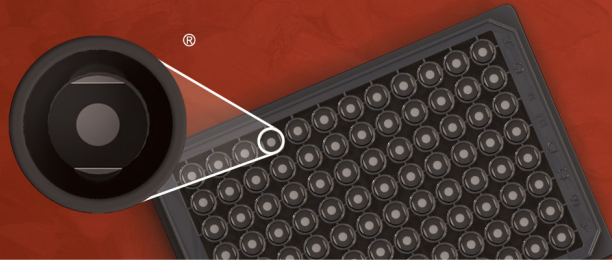
U-PLEX®

NHP MCP-2 Assay



www.mesoscale.com®

Ordering Information

MSD Customer Service
Phone: 1-301-947-2085
Fax: 1-301-990-2776
Email: CustomerService@mesoscale.com

Scientific Support

Phone: 1-301-947-2025
Email: ScientificSupport@mesoscale.com

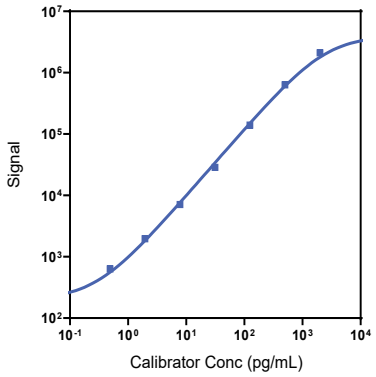
Company Address

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

Product Options	Available in: U-PLEX® Biomarker Group 1 (NHP) multiplex combination: K15068L-1/-2/-4
	Individual assay: K156XHK-1/-2/-4; is available on either SECTOR™ or QuickPlex® plate
	Antibody Set: B21XH-2/B21XH-3
Assay Protocol	The U-PLEX Biomarker Group 1 (NHP) product insert is 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 MCP-2 Assay tested on U-PLEX plates run as a multiplex. The data were generated during the development of the assay and do not represent the product specifications. Under your experimental conditions and with your specific multiplex, the assay may perform differently than the representative data shown. U-PLEX assays are available in multiplex format with other compatible assays. The same assay can also be used to detect a single analyte on MSD GOLD™ Small Spot Streptavidin plates.

Representative Calibration Curve and Sensitivity



Assay	Median LLOD (pg/mL)	LLOD Range (pg/mL)
MCP-2	0.11	0.11-0.17

The calibration curves used to calculate analyte concentrations were established by fitting the signals from the Calibrators using a 4-parameter logistic (or sigmoidal dose-response) model with a $1/Y^2$ weighting. Analyte concentrations were determined from the electrochemiluminescence signals by back-fitting to the calibration curve. The lower limit of detection (LLOD) is a calculated concentration corresponding to the signal 2.5 standard deviations above the background (zero Calibrator).

Precision

	Control	Average Conc. (pg/mL)	Average Intra-run Conc. %CV	Inter-run Conc. %CV
MCP-2	High	229	3.5	10.6
	Mid	46	3.5	10.9
	Low	9.2	3.8	11.9

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.

Spike Recovery

		Serum (N=5)		Plasma (N=5)		Stimulated Cell Models (N=5)	
	Spike Level	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
Cynomolgus Monkey	High	95	72-109	104	100-108	104	98-108
	Mid	94	67-106	97	92-103	96	93-101
	Low	77	55-89	79	75-84	93	90-95
Rhesus Monkey	High	91	85-97	75	74-77	104	98-108
	Mid	95	90-101	74	62-79	96	93-101
	Low	83	76-88	78	69-84	93	90-95

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 require additional dilution with assay diluent to reduce matrix effects.
% Recovery = (measured concentration / expected concentration) x 100

Tested Samples

	Sample Type	Serum (N=11)	Plasma (N=11)	Stimulated Cell Models (N=10)
Cynomolgus Monkey	Median (pg/mL)	2.9	2.3	223
	Range (pg/mL)	2.0-8.4	1.7-4.9	0.4-1,530
	% Detected	100	100	100
Rhesus Monkey	Median (pg/mL)	3.1	3.8	146
	Range (pg/mL)	0.5-5.5	2.3-8.8	2.6-1,050
	% Detected	100	100	100

Normal serum and EDTA plasma samples were tested without dilution prior to the assay.

Dilution Linearity

	Serum (N=5)			Plasma (N=5)			Stimulated Cell Models (N=5)		
	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
Cynomolgus Monkey	2	108	106-109	2	106	104-108	2	94	87-98
	4	105	98-109	4	104	100-110	4	90	79-104
	8	106	100-111	8	108	102-113	8	79	69-92
Rhesus Monkey	2	108	106-115	2	107	102-111	2	94	87-98
	4	109	100-126	4	107	101-110	4	90	79-104
	8	109	96-141	8	104	102-108	8	79	69-92

Normal serum, EDTA plasma, and cell culture media were spiked with recombinant Calibrator and tested at different dilutions. Undiluted samples were tested to determine the expected concentration of the analyte. Samples may require additional dilution with assay diluent to reduce matrix effects.
% Recovery = (measured concentration / expected concentration) x 100

Specificity

To assess specificity, the MCP-2 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

The data included in this document has been collected using Diluents 3 and 43. 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: NHP MCP-2 is included in Calibrator 10. The full-length recombinant protein expressed in *E.coli* is used.
Antibodies: The U-PLEX NHP MCP-2 Assay uses mouse monoclonal antibody for capture and rabbit polyclonal 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.