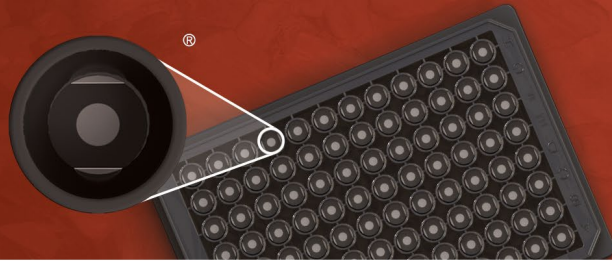
U-PLEX®

NHP MIP-1α



www.mesoscale.com®

Ordering Information

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Company Address

MESO SCALE DISCOVERY®
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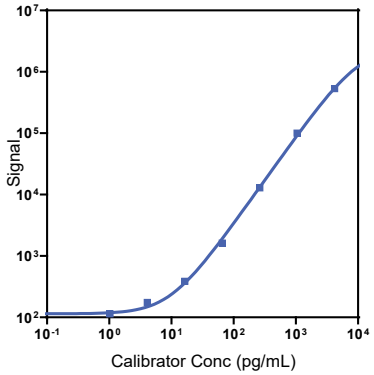
Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156UJK-1/-2/-4	U-PLEX NHP MIP-1α Assay with SECTOR™ plates
	K156UJK-21/-22/-24	U-PLEX NHP MIP-1α Assay with QuickPlex® plates
	K256UJK-2/-4	U-PLEX NHP MIP-1α Assay with 384-well plates
Antibody Set	B21UJ-2/-3	U-PLEX Human MIP-1α 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 MIP-1α 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)
MIP-1α	3.91	2.45-5.40

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
MIP-1α	High	1,600	2.4	7.8
	Mid	148	2.7	8.9
	Low	18.4	7.4	13.1

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	137.9	125-148	170	145-189	138	126-155
	Mid	119	107-134	146.8	139-154	149	135-169
	Low	104.5	97-119	138	119-157	130	112-145
Rhesus Monkey	High	152.3	147-160	157.7	128-172	138	126-155
	Mid	129.5	125-134	132	108-147	149	135-169
	Low	114.9	107-122	119.1	99-136	130	112-145

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)	33.8	5.28	1,440
	Range (pg/mL)	16.2-63.4	ND-11.0	ND-23,400
	% Detected	100	80	80
Rhesus Monkey	Median (pg/mL)	25.9	8.3	2,100
	Range (pg/mL)	14.3-46.5	4.30-9.70	ND-4,720
	% Detected	100	100	60

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

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	80	79-81	2	80	76-82	2	83	78-87
	4	73	72-76	4	72	71-73	4	72	68-78
	8	72	69-77	8	72	70-73	8	68	65-71
Rhesus Monkey	2	86	83-91	2	78	72-88	2	83	78-87
	4	81	76-86	4	72	66-83	4	72	68-78
	8	77	72-82	8	69	63-82	8	68	65-71

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

MSD U-PLEX NHP MIP-1α

Specificity

To assess specificity, the MIP-1α 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: MIP-1α is included in Calibrator 2. The full-length recombinant protein is expressed in *E. coli*.
Antibodies: The U-PLEX NHP MIP-1α 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.