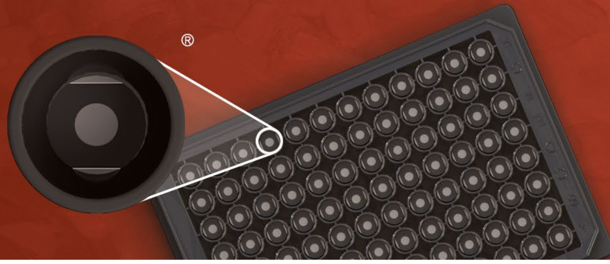
U-PLEX®

NHP MIP-1β



www.mesoscale.com®

Ordering Information

MSD Customer Service
Phone: 1-240-314-2795
Fax: 1-301-990-2776
Email: CustomerService@
mesoscale.com

Scientific Support

Phone: 1-240-314-2798
Email: ScientificSupport@
mesoscale.com

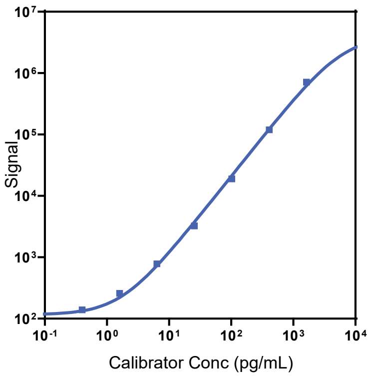
Company Address

Meso Scale Discovery
A division of
Meso Scale Diagnostics, LLC.
1601 Research Boulevard
Rockville, MD 20850-3173 USA

Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156UKK-1/-2/-4	U-PLEX NHP MIP-1β Assay with SECTOR™ plates
	K156UKK-21/-22/-24	U-PLEX NHP MIP-1β Assay with QuickPlex Ultra™ plates
	K256UKK-2/-4	U-PLEX NHP MIP-1β Assay with 384-well plates
Antibody Set	B21UK-2/-3	U-PLEX Human MIP-1β 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 MIP-1β 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-1β	0.6	0.42-0.93

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-1β	High	664	6.7	14.8
	Mid	59.5	6.9	16.7
	Low	6.8	9.3	18.5

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 MIP-1β

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	94.6	90-100	98.7	86-106	99	95-111
	Mid	90.9	87-99	91.9	89-95	93	85-111
	Low	98.4	93-106	95.7	93-100	87	73-97
Rhesus Monkey	High	104.3	94-111	88.5	58-106	99	95-111
	Mid	1004	93-115	87.8	73-97	93	85-111
	Low	100	94-109	97.8	91-116	87	73-97

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)	53.6	29	554
	Range (pg/mL)	23.2-99.3	12.0-60.4	266-1,800
	% Detected	100	100	100
Rhesus Monkey	Median (pg/mL)	51.2	35	1,650
	Range (pg/mL)	28.4-111	18.8-54.8	938-1,940
	% 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	102	99-106	2	104	99-108	2	95	88-100
	4	103	99-107	4	106	100-110	4	95	86-105
	8	102	97-110	8	107	102-110	8	96	84-110
Rhesus Monkey	2	106	98-116	2	110	96-129	2	95	88-100
	4	105	98-117	4	119	96-151	4	95	86-105
	8	102	92-111	8	121	98-161	8	96	84-110

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 MIP-1β 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-1β is included in Calibrator 2. The full-length recombinant protein is expressed in *E. coli*.

Antibodies: The U-PLEX NHP MIP-1β 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.