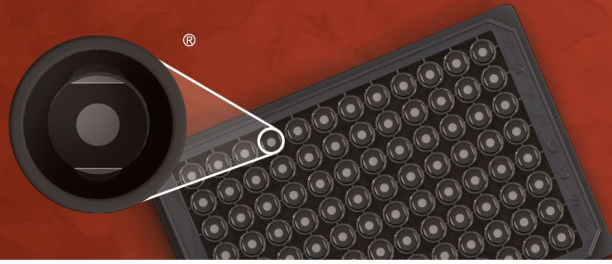
U-PLEX®

NHP MIF



www.mesoscale.com®

Ordering Information

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Company Address

MESO SCALE DISCOVERY
A division of
Meso Scale Diagnostics, LLC.
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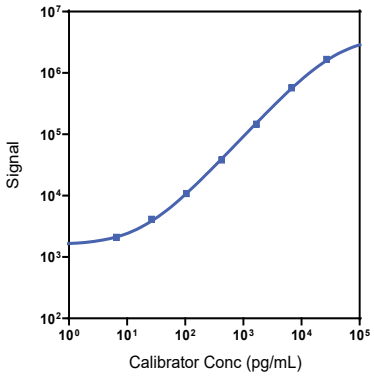
Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156XJK-1/-2/-4	U-PLEX NHP MIF Assay with SECTOR™ plates
	K156XJK-21/-22/-24	U-PLEX NHP MIF Assay with QuickPlex Ultra™ plates
	K256XJK-2/-4	U-PLEX NHP MIF Assay with 384-well plates
Antibody Set	B21XJ-2/-3	U-PLEX Human MIF 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 MIF 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)
MIF	4.3	2.9-6.3

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
MIF	High	2,000	3.3	13.7
	Mid	451	5.0	11.6
	Low	61	5.7	17.9

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)		Cell Culture Media (N=5)	
	Spike Level	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
Cynomolgus Monkey	High	84	73-93	83	79-86	101	99-103
	Mid	97	91-110	88	85-92	104	99-109
	Low	92	83-100	85	79-88	104	93-114
Rhesus Monkey	High	84	73-93	66	62-68	101	99-103
	Mid	97	91-110	70	67-73	104	99-109
	Low	92	83-100	72	66-77	104	93-114

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=11)	Plasma (N=11)	Cell Culture Media (N=10)
Cynomolgus Monkey	Median (pg/mL)	AS	15,300	20,600
	Range (pg/mL)	AS	8,880-AS	2,200-AS
	% Detected	100	100	100
Rhesus Monkey	Median (pg/mL)	25,100	AS	22,400
	Range (pg/mL)	8,360-AS	12,300-AS	19,500-AS
	% Detected	100	100	100

Normal serum, EDTA plasma, and cell culture media were diluted 2-fold prior to the assay. AS = above standard 1

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	20	37	32-46	20	79	74-82	2	93	87-97
	200	100	100-100	200	105	98-110	4	91	86-102
	2,000	333	300-365	2,000	96	87-110	8	90	82-103
Rhesus Monkey	20	100	100-100	20	79	40-95	2	93	87-97
	200	94	87-98	200	102	90-114	4	91	86-102
	2,000	90	78-97	2,000	101	83-117	8	90	82-103

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 MIF Antibody Set was tested individually against a larger panel of 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%. IFN-α2a detection antibody interacts with MIF capture antibody resulting in elevated background.

% 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: MIF is included in Calibrator 10. The full-length recombinant protein is expressed in *E. coli*.
Antibodies: The U-PLEX NHP MIF 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.

Note: MSD recommends that samples be diluted 100-fold prior to analysis in this assay.