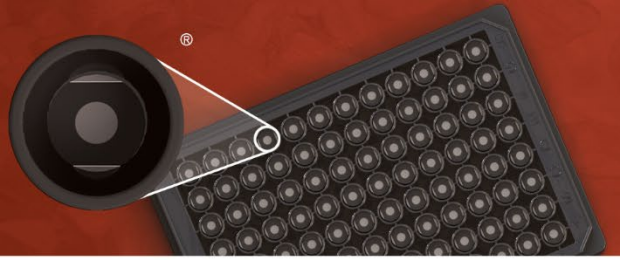
U-PLEX®

NHP IFN-α2a



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

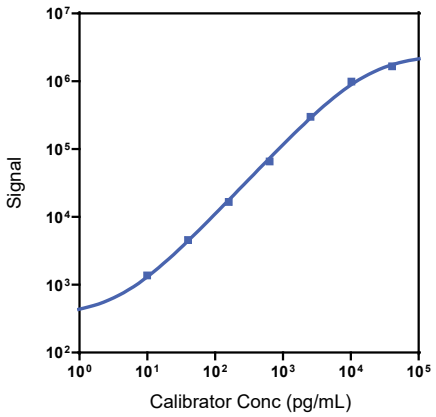
Company Address

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	K156VHK-1/-2/-4	U-PLEX NHP IFN-α2a Assay with SECTOR™ plates
	K156VHK-21/-22/-24	U-PLEX NHP IFN-α2a Assay with QuickPlex Ultra™ plates
	K256VHK-2/-4	U-PLEX NHP IFN-α2a Assay with 384-well plates
Antibody Set	B26VH-2	U-PLEX Human IFN-α2a Antibody Set
Assay Protocol	U-PLEX Product Inserts are available at www.mesoscale.com	

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 IFN-α2a 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)
IFN-α2a	1.7	1.3 - 1.8

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
IFN-α2a	High	14,000	4.2	14.3
	Mid	1,160	4.5	9.8
	Low	116	2.2	16.8

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		Plasma		Cell Culture Media	
	Spike Level	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
Cynomolgus Monkey	High	70	66-73	79	68-91	176	163-189
	Mid	60	56-62	66	57-70	136	122-148
	Low	53	49-57	60	53-65	122	112-132
Rhesus Monkey	High	94	74-103	69	60-79	176	163-189
	Mid	85	60-95	67	58-74	136	122-148
	Low	83	56-93	63	55-73	122	112-132

Normal serum and plasma were spiked with Calibrator at 3 levels. Spiked samples were diluted 2-fold 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	Plasma	Stimulated PBMC Sample
Cynomolgus Monkey	Median (pg/mL)	ND	ND	3.1
	Range (pg/mL)	ND	ND	2.5-31
	% Detected	NA	NA	100
Rhesus Monkey	Median (pg/mL)	ND	ND	2.9
	Range (pg/mL)	ND-4.4	ND	ND-53
	% Detected	9.1	NA	80

Normal serum and plasma samples were diluted 2-fold prior to the assay. ND = not detectable (<LLOD); NA = not applicable due to 0% detected

Dilution Linearity

	Serum			Plasma			Cell Culture Media		
	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
Cynomolgus Monkey	2	112	110-117	2	107	96-117	2	93	88-99
	4	113	108-118	4	110	92-123	4	86	82-92
	8	110	105-122	8	105	86-126	8	80	73-87
Rhesus Monkey	2	116	96-134	2	111	106-120	2	93	88-99
	4	115	92-138	4	109	101-122	4	86	82-92
	8	113	91-137	8	111	102-119	8	80	73-87

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 IFN-α2a 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-α, IL-1α, IL-1β, IL-1RA, IL-2, IL-2Rα 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-1α, 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 capture antibodies for Eotaxin-3, IL-1α, IL-2, IL-17C, IL-17F, IL-23, and MIF, causing 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: IFN-α2a is included in Calibrator 3 blend. The full-length recombinant protein is expressed in *E. coli*.
Antibodies: The U-PLEX NHP IFN-α2a Assay uses a mouse monoclonal antibody for capture and a 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.