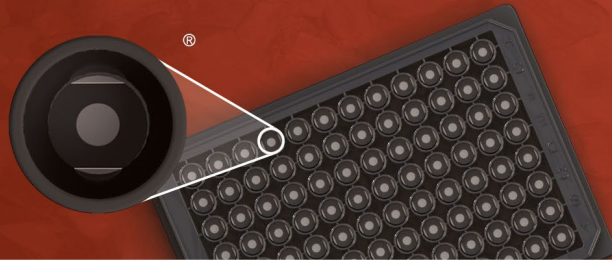
U-PLEX®

NHP IL-6



www.mesoscale.com®

Ordering Information

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Company Address

MESO SCALE DISCOVERY®
A division of
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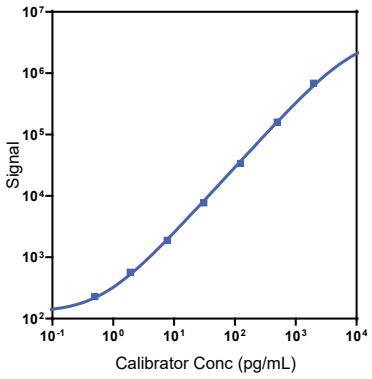
Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156TXK-1/-2/-4	U-PLEX NHP IL-6 Assay with SECTOR™ plates
	K156TXK-21/-22/-24	U-PLEX NHP IL-6 Assay with QuickPlex® plates
	K256TXK-2/-4	U-PLEX NHP IL-6 Assay with 384-well plates
Antibody Set	B21TX-2/-3	U-PLEX Human IL-6 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 IL-6 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)
IL-6	0.20	0.14-0.17

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
IL-6	High	833	3.9	5.5
	Mid	83.6	3.5	8.2
	Low	9.0	4.3	13.0

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	78.8	69-92	86.8	50-102	124	122-127
	Mid	77.3	71-89	84.3	51-99	116	114-120
	Low	80.3	73-89	83.5	50-98	121	118-124
Rhesus Monkey	High	101.4	93-108	97.8	89-105	124	122-127
	Mid	95	91-101	96.3	88-109	116	114-120
	Low	96.2	84-106	95.8	83-108	121	118-124

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)	0.26	0.26	266
	Range (pg/mL)	ND-1.38	ND -1.21	38.9-513
	% Detected	60	50	100
Rhesus Monkey	Median (pg/mL)	ND	0.40	135
	Range (pg/mL)	ND-1.10	ND-4.50	42.7-687
	% Detected	30	70	100

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	96	85-105	2	107	99-120	2	98	93-102
	4	98	85-104	4	110	95-145	4	96	90-101
	8	104	88-114	8	108	87-147	8	94	90-96
Rhesus Monkey	2	93	61-105	2	97	89-109	2	98	93-102
	4	106	100-113	4	97	87-105	4	96	90-101
	8	108	101-116	8	103	94-127	8	94	90-96

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 IL-6 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: IL-6 is included in Calibrator 1. The full-length recombinant protein is expressed in *E. coli*.
Antibodies: The U-PLEX NHP IL-6 Assay uses a mouse monoclonal antibody for capture and a goat polyclonal antibody for detection.
Assay generation: C

Note: This datasheet contains representative assay performance data. In custom multiplex formats, the assay may perform differently than the representative data shown.