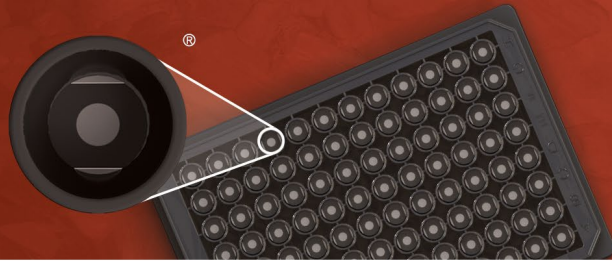
U-PLEX®

NHP IL-12/IL-23p40



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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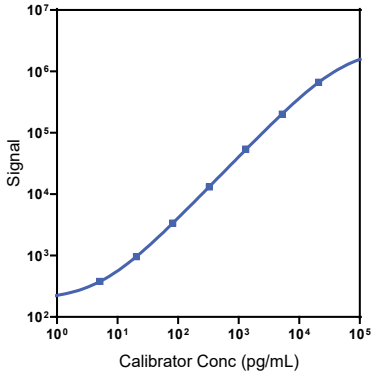
Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156UQK-1/-2/-4	U-PLEX NHP IL-12/IL-23p40 Assay with SECTOR™ plates
	K156UQK-21/-22/-24	U-PLEX NHP IL-12/IL-23p40 Assay with QuickPlex® plates
	K256UQK-2/-4	U-PLEX NHP IL-12/IL-23p40 Assay with 384-well plates
Antibody Set	B21UQ-2/-3	U-PLEX Human IL-12/IL-23p40 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-12/IL-23p40 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)
NHP IL-12/IL-23p40	1.16	0.64-2.82

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-12/ IL-23p40	High	8,540	4.0	6.9
	Mid	930	4.9	8.5
	Low	97.0	4.3	9.4

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	109.4	104-122	99.2	87-119	153	147-160
	Mid	111.6	105-126	101.5	90-122	159	155-164
	Low	110.2	104-125	1006	93-121	145	137-149
Rhesus Monkey	High	119	101-130	102	44-137	153	147-160
	Mid	121	110-130	102	41-130	159	155-164
	Low	119	106-129	97	51-118	145	137-149

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)	37.3	42.3	81.4
	Range (pg/mL)	10.2-132	9.96-105	24.5-100
	% Detected	100	100	100
Rhesus Monkey	Median (pg/mL)	62.1	75.2	84.3
	Range (pg/mL)	30.0-242	27.0-247	72.5-107
	% 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	94	86-98	2	91	82-99	2	87	84-88
	4	92	80-97	4	87	78-100	4	76	73-80
	8	89	77-94	8	82	72-94	8	69	64-77
Rhesus Monkey	2	92	86-98	2	94	89-98	2	87	84-88
	4	90	84-98	4	91	77-104	4	76	73-80
	8	88	81-100	8	90	74-119	8	69	64-77

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 NHP IL-12/IL-23p40 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%.

The IL-12/IL-23p40 and IL-12p70 analytes both contain IL-12b (the p40 subunit). Due to cross-reactivity of the IL-12/IL-23p40 assay with the IL-12p70 analyte, we do not recommend multiplexing these two assays on the same plate.

% 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: NHP IL-12/IL-23p40 is included in Calibrator 3. The full-length recombinant protein is expressed in an insect cell line.
Antibodies: The U-PLEX NHP IL-12/IL-23p40 Assay uses a mouse monoclonal antibody for capture and a mouse monoclonal 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.