NHP IL-23

Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156WGK-1/-2/-4	U-PLEX NHP IL-23 Assay with SECTOR™ plates
	K156WGK-21/-22/-24	U-PLEX NHP IL-23 Assay with QuickPlex® plates
	K256WGK-2/-4	U-PLEX NHP IL-23 Assay with 384-well plates
Antibody Set	B21WG-2/-3	U-PLEX Human IL-23 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-23 Assay tested on U-PLEX 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-23	1.4	0.99-2.0

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-23	High	2,870	1.3	8.5
	Mid	397	4.1	17.6
	Low	45	13.4	30.9

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.

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Spike Recovery

	Spike Level	Serum (N=5)		Plasma (N=5)		Cell Culture Media (N=5)	
		Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
Cynomolgus Monkey	High	90	79-96	98	88-105	129	122-137
	Mid	81	67-90	86	76-91	125	120-131
	Low	59	41-75	70	62-79	127	123-131
Rhesus Monkey	High	87	74-97	86	66-96	129	122-137
	Mid	84	70-94	83	65-94	125	120-131
	Low	83	69-94	79	55-93	127	123-131

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

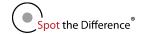|	Sample Type	Serum (N=11)	Plasma (N=11)	Cell Culture Media (N=10)
Cynomolgus Monkey	Median (pg/mL)	NA	ND	17
	Range (pg/mL)	NA	ND-17	11-40
	% Detected	0	18	100
Rhesus Monkey	Median (pg/mL)	2.2	ND	49
	Range (pg/mL)	ND-24	ND-6.6	ND-204
	% Detected	45	9.1	90

Normal serum, EDTA plasma, and cell culture media were tested without dilution prior to the assay. ND = not detectable (<LLOD); NA = not applicable due to 0% detected

Dilution Linearity

		Serum (N=5)			Plasma (N=5)			Cell Culture Media (N=4)		
	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
Cynomolgus Monkey	2	105	101-110	2	103	98-108	2	96	96-98
	4	110	104-118	4	107	102-112	4	90	89-92
	8	105	93-124	8	100	91-115	8	86	82-91
Rhesus Monkey	2	105	89-113	2	121	111-135	2	96	96-98
	4	97	82-103	4	123	114-133	4	90	89-92
	8	96	85-100	8	124	108-137	8	86	82-91

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

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Specificity

To assess specificity, the IL-23 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%.

IFN-α2a detection antibody interacts with IL-23 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: IL-23 is included in Calibrator 6. The Calibrator is a recombinant hetero-dimer comprised of p40 (23-328) covalently linked to p19 (20-189) that is expressed in an insect cell line.
Antibodies: The U-PLEX NHP IL-23 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.

For Research Use Only. Not for use in diagnostic procedures.