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## Ordering Information

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## Scientific Support

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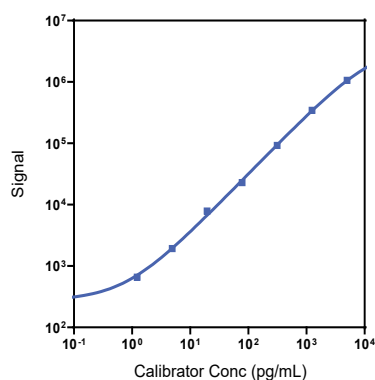
## Company Address

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)
	K156VLK-1/-2/-4	U-PLEX NHP YKL-40 Assay with SECTOR™ plates
Singleplex	K156VLK-21/-22/-24	U-PLEX NHP YKL-40 Assay with QuickPlex Ultra™ plates
	K256VLK-2/-4	U-PLEX NHP YKL-40 Assay with 384-well plates
Antibody Set	B21VL-2/-3	U-PLEX Human YKL-40 Antibody Set
Assay Protocol	U-PLEX Product Inserts are available at <a href="http://www.mesoscale.com">www.mesoscale.com</a>	

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 YKL-40 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)
YKL-40	0.39	0.28-1.0

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
YKL-40	High	570	4.3	9.6
	Mid	93	4.1	8.7
	Low	14	4.4	12.2

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.

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

## 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	106	92-116	105	97-111	104	98-108
	Mid	115	110-126	109	100-117	96	93-101
	Low	109	99-122	106	102-112	93	90-95
Rhesus Monkey	High	106	92-116	103	83-131	104	98-108
	Mid	115	110-126	113	101-148	96	93-101
	Low	109	99-122	113	101-142	93	90-95

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.

$$\% \text{ Recovery} = (\text{measured concentration} / \text{expected concentration}) \times 100$$

## Tested Samples

	Sample Type	Serum (N=11)	Plasma (N=11)	Cell Culture Media (N=10)
Cynomolgus Monkey	Median (pg/mL)	AS	AS	226
	Range (pg/mL)	AS	AS	12-368
	% Detected	100	100	100
Rhesus Monkey	Median (pg/mL)	AS	AS	3,530
	Range (pg/mL)	AS	AS	2,960-AS
	% Detected	100	100	100

Normal serum and plasma samples were diluted 2-fold prior to testing in 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	NA	NA	20	NA	NA	2	89	87-91
	200	100	100-100	200	100	100-100	4	86	81-95
	2,000	215	163-295	2,000	97	91-99	8	83	79-94
Rhesus Monkey	20	NA	NA	20	NA	NA	2	89	87-91
	200	100	100-100	200	100	100-100	4	86	81-95
	2,000	92	83-101	2,000	101	98-103	8	83	79-94

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. NA = not applicable due to 0% detected

$$\% \text{ Recovery} = (\text{measured concentration} / \text{expected concentration}) \times 100$$

# MSD U-PLEX NHP YKL-40

## Specificity

To assess specificity, the YKL-40 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- $\alpha$ , I-309, IFN- $\alpha$ 2a, IFN- $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , 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-17AF, 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-1 $\alpha$ , MIP-1 $\beta$ , MIP-3 $\alpha$ , MIP-3 $\beta$ , MIP-5, SDF-1 $\alpha$ , TARC, TNF- $\alpha$ , TNF- $\beta$ , TPO, TRAIL, VEGF-A, and YKL-40). Nonspecific binding was less than 0.5%.

$$\% \text{ Nonspecificity} = (\text{nonspecific signal} / \text{specific signal}) \times 100$$

## 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:** YKL-40 is included in Calibrator 10. The full-length recombinant protein is expressed in *E. coli*.

**Antibodies:** The U-PLEX NHP YKL-40 Assay uses a mouse monoclonal antibody for capture and a goat polyclonal antibody for detection.

**Assay generation:** B

**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.

