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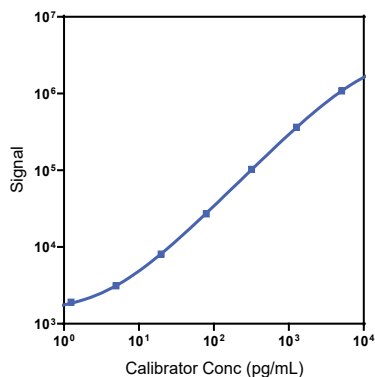
Company Address

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)
	K156UNK-1/-2/-4	U-PLEX NHP IL-1 α Assay with SECTOR [™] plates
Singleplex	K156UNK-21	U-PLEX NHP IL-1 α Assay with QuickPlex [®] APT plates
	K256UNK-2/-4	U-PLEX NHP IL-1 α Assay with 384-well plates
Antibody Set	B26UN	U-PLEX NHP IL-1 α Antibody Set (1 plate 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-1 α 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-1 α	0.60	0.34-1.6

The Calibrator curve was fitted with a 4-parameter logistic model with a 1/Y² 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-1 α	High	2,820	2.8	10.6
	Mid	294	3.5	12.4
	Low	30	4.7	16.7

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

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

	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	41	16-69	53	45-63	129	122-137
	Mid	41	15-73	54	42-63	125	120-131
	Low	39	13-68	54	42-65	127	123-131
Rhesus Monkey	High	29	11-47	62	59-66	—	—
	Mid	29	7.0-53	60	55-65	—	—
	Low	35	7.0-52	60	55-64	—	—

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. dash (—) = not available

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

Tested Samples

	Sample Type	Serum (N=8)	Plasma (N=8)	Cell Culture Media (N=8)
Cynomolgus Monkey	Median (pg/mL)	NA	NA	0.10
	Range (pg/mL)	NA	NA	ND-0.53
	% Detected	0	0	25
Rhesus Monkey	Median (pg/mL)	0	NA	0
	Range (pg/mL)	ND-0.90	NA	ND-0.40
	% Detected	13	0	13

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 (N=4)			Plasma (N=4)			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	187	158-252	2	144	125-156	2	111	106-117
	4	335	217-535	4	182	160-223	4	113	106-125
	8	420	254-735	8	203	170-250	8	113	105-125
Rhesus Monkey	2	208	151-317	2	138	127-155	2	—	—
	4	380	185-802	4	157	141-178	4	—	—
	8	482	201-1,100	8	166	151-185	8	—	—

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. dash (—) = not available

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

MSD U-PLEX NHP IL-1 α

Specificity

To assess specificity, the IL-1 α 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- α 2a, IFN- γ , IL-1 α , IL-1 β , 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-1 α , MIP-1 β , MIP-3 α , MIP-3 β , MIP-5, SDF-1 α , TARC, TNF- α , TNF- β , 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: IL-1 α is included in Calibrator 3. The full-length recombinant protein is expressed in *E. coli*.

Antibodies: The U-PLEX NHP IL-1 α 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.

