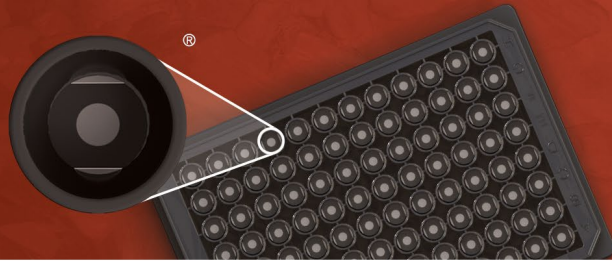
U-PLEX®

NHP IL-1β



www.mesoscale.com®

Ordering Information

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Company Address

MESO SCALE DISCOVERY®
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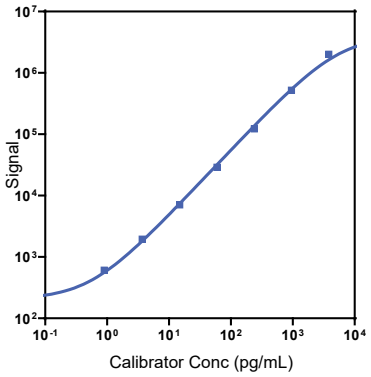
Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156TUK-1/-2/-4	U-PLEX NHP IL-1β Assay with SECTOR™ plates
	K156TUK-21/-22/-24	U-PLEX NHP IL-1β Assay with QuickPlex® plates
	K256TUK-2/-4	U-PLEX NHP IL-1β Assay with 384-well plates
Antibody Set	B21TU-2/-3	U-PLEX Human IL-1β 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-1β 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-1β	0.11	0.05-0.64

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-1β	High	1,720	3.0	5.1
	Mid	170	3.7	7.5
	Low	17.6	4.8	11.6

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	46.8	17-55	51.1	24-53	111	113-117
	Mid	47	17-51	51.1	23-53	107	107-115
	Low	47.1	17-50	49.8	23-53	114	115-119
Rhesus Monkey	High	47	28-68	56	34-58	111	113-117
	Mid	44.9	26-65	55	32-53	107	107-115
	Low	45.1	27-64	53.2	33-52	114	115-119

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)	NA	NA	16.16
	Range (pg/mL)	NA	NA	0.61-35.9
	% Detected	0	0	100
Rhesus Monkey	Median (pg/mL)	NA	NA	0.7
	Range (pg/mL)	NA	NA	0.30-26.4
	% Detected	0	0	100

Normal serum and plasma samples were tested without dilution prior to the assay. NA = not applicable due to 0% detected

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	167	147-192	2	165	148-193	2	104	99-108
	4	202	181-220	4	206	163-265	4	108	104-112
	8	248	186-345	8	222	163-301	8	107	105-110
Rhesus Monkey	2	149	108-202	2	140	117-163	2	104	99-108
	4	205	146-297	4	157	114-206	4	108	104-112
	8	226	152-343	8	181	146-213	8	107	105-110

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-1β 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-1β is included in Calibrator 1. The full-length recombinant protein is expressed in *E. coli*.
Antibodies: The U-PLEX NHP IL-1β 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.