



# NHP IL-1RA



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## Ordering Information

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## Company Address

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Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
	K156XPK-1/-2/-4	U-PLEX NHP IL-1RA Assay with SECTOR™ plates
Singleplex	K156XPK-21/-22/-24	U-PLEX NHP IL-1RA Assay with QuickPlex® plates
	K256XPK-2/-4	U-PLEX NHP IL-1RA Assay with 384-well plates
Antibody Set	B21XP-2/-3	U-PLEX Human IL-1RA Antibody Set
Assay Protocol	U-PLEX Product Inserts are available at <a href="http://www.mesoscale.com">www.mesoscale.com</a>	

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-1RA 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-1RA	1.7	1.5-2.4

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-1RA	High	644	3.0	6.2
	Mid	194	3.1	5.9
	Low	53	5.5	7.9

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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.

# MSD® U-PLEX NHP IL-1RA

## 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	73	52-79	76	69-84	118	112-125
	Mid	83	61-97	84	77-93	103	88-117
	Low	86	72-97	89	84-98	98	84-108
Rhesus Monkey	High	79	61-94	75	63-88	118	112-125
	Mid	90	67-104	85	67-94	103	88-117
	Low	95	80-103	90	78-96	98	84-108

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)	496	137	2,990
	Range (pg/mL)	94-1,910	54-545	131-AS
	% Detected	100	100	100
Rhesus Monkey	Median (pg/mL)	166	88	3,870
	Range (pg/mL)	36-395	41-1,680	59-AS
	% Detected	100	100	100

Normal serum and plasma samples were tested without dilution prior to 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	2	113	104-125	2	118	98-146	2	96	92-100
	4	112	97-128	4	118	84-170	4	96	92-99
	8	114	94-137	8	123	75-196	8	71	66-77
Rhesus Monkey	2	114	100-122	2	117	103-134	2	96	92-100
	4	118	97-141	4	116	94-143	4	96	92-99
	8	114	90-142	8	121	94-150	8	71	66-77

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

# MSD U-PLEX NHP IL-1RA

## Specificity

To assess specificity, the IL-1RA 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- $\alpha$ , 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-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 $\alpha$ , 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%.

% 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-1RA is included in Calibrator 9. The full-length recombinant protein is expressed in *E. coli*.

**Antibodies:** The U-PLEX NHP IL-1RA Assay uses a mouse monoclonal antibody for capture and a goat polyclonal 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.

