U-PLEX®

NHP GRO-α

www.mesoscale.com®

Ordering Information

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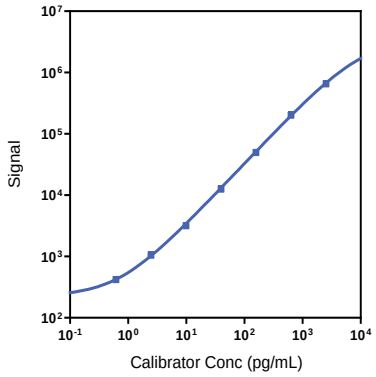
Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156UXK-1/-2/-4	U-PLEX NHP GRO-α Assay with SECTOR™ plates
	K156UXK-21/-22/-24	U-PLEX NHP GRO-α Assay with QuickPlex® plates
	K256UXK-2/-4	U-PLEX NHP GRO-α Assay with 384-well plates
Antibody Set	B21UX-2/-3	U-PLEX Human GRO-α 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 GRO-α 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)
GRO-α	0.25	0.21-0.25

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
GRO-α	High	300	4.8	10.4
	Mid	81	4.7	8.7
	Low	18	8.9	12.7

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 GRO-α

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	79	76-82	82	57-95	101	93-108
	Mid	85	79-89	81	57-92	104	98-109
	Low	86	84-88	59	42-72	101	93-110
Rhesus Monkey	High	76	74-79	77	74-81	101	93-108
	Mid	84	79-92	84	78-93	104	98-109
	Low	85	82-89	82	77-87	101	93-110

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)	1,180	41	AS
	Range (pg/mL)	257-AS	12-1,520	152-AS
	% Detected	100	100	100
Rhesus Monkey	Median (pg/mL)	1,360	636	AS
	Range (pg/mL)	18-AS	123-AS	192-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	104	100-112	2	110	104-120	2	89	79-98
	4	97	91-107	4	111	100-125	4	82	71-100
	8	93	84-108	8	117	106-140	8	77	64-97
Rhesus Monkey	2	135	108-157	2	113	105-121	2	89	79-98
	4	150	106-202	4	109	92-127	4	82	71-100
	8	167	105-241	8	115	86-145	8	77	64-97

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 GRO-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-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: GRO-α is included in Calibrator 10. The full-length recombinant protein is expressed in *E. coli*.
Antibodies: The U-PLEX NHP GRO-α 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.