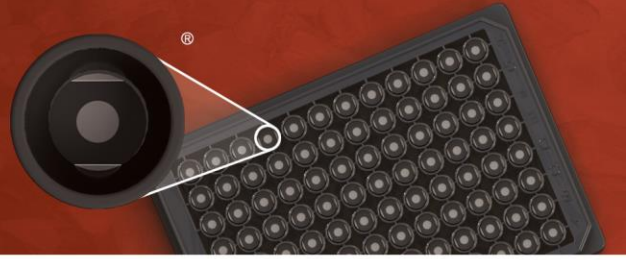
U-PLEX®

NHP TGF-β1



www.mesoscale.com®

Ordering Information

MSD Customer Service
Phone: 1-240-314-2795
Fax: 1-301-990-2776
Email: CustomerService@mesoscale.com

Scientific Support

Phone: 1-240-314-2798
Email: ScientificSupport@mesoscale.com

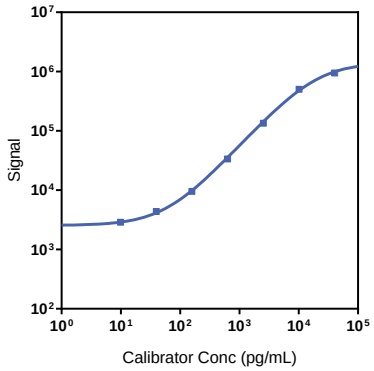
Company Address

MESO SCALE DISCOVERY®
A division of
Meso Scale Diagnostics, LLC.
1601 Research Boulevard
Rockville, MD 20850-3173 USA

Product Options	Catalog Number	Description
Multiplex	K156ADM, K256ADM	U-PLEX Biomarker Group 2 (NHP)
Singleplex	K156XWK-1/-2/-4	U-PLEX NHP TGF-β1 Assay with SECTOR™ plates
	K156XWK-21/-22/-24	U-PLEX NHP TGF-β1 Assay with QuickPlex® plates
	K256XWK-2/-4	U-PLEX NHP TGF-β1 Assay with 384-well plates
Antibody Set	B20XW-2/-3	U-PLEX TGF-β1 Antibody Set
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 TGF-β1 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)
TGF-β1	9.1	5.0-10

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)
High	1,570	4.7	11.1
Mid	388	5.5	11.6
Low	104	5.7	16.8

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 TGF-β1

Tested Samples

	Sample Type	Serum (N=12)	Plasma (N=12)
Cynomolgus Monkey	Median (pg/mL)	16,300	2,260
	Range (pg/mL)	2,640-AS	679-13,800
	% Detected	100	100
Rhesus Monkey	Median (pg/mL)	23,100	2,750
	Range (pg/mL)	18,600-28,100	149-10,300
	% Detected	100	100

Normal serum and EDTA plasma samples were tested without dilution prior to the assay. Samples were prepared using an acidification step.
AS = above standard 1

Dilution Linearity

	Serum			Plasma			Cell Culture Media		
	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilutio	Average % Recovery	% Recovery Range
Cynomolgus Monkey	2	120	115-125	2	133	121-147	2	114	105-125
	4	127	123-133	4	147	125-165	4	114	104-125
	8	135	127-147	8	176	132-225	8	118	106-139
Rhesus Monkey	2	145	132-155	2	142	118-168	2	114	105-125
	4	167	139-187	4	159	132-191	4	114	104-125
	8	194	157-229	8	181	133-220	8	118	106-139

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

Spike Recovery

		Serum		Plasma		Cell Culture Media	
	Spike Level	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
Cynomolgus Monkey	High	65	46-75	51	46-56	70	61-86
	Mid	66	43-77	46	42-51	69	63-81
	Low	70	45-86	41	37-46	66	59-78
Rhesus Monkey	High	44	22-60	39	28-51	70	61-86
	Mid	52	22-57	40	27-55	69	63-81
	Low	50	21-51	37	21-53	66	59-78

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

MSD U-PLEX NHP TGF-β1

Specificity

To assess specificity, the TGF-β1 Antibody Set was tested individually against a panel of NHP analytes for nonspecific binding (TGF-β1, TGF-β2, and TGF-β3). Nonspecific binding was less than 0.5%.

% Nonspecificity = (nonspecific signal / specific signal) x 100

It is recommended that acid-treated samples are used for evaluation of TGF-β1. Samples may benefit from an additional dilution prior to measurement to ensure TGF-β1 levels are in the quantitative range of the assay.

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: TGF-β1 is included in Calibrator 11. The TGF-β1 Calibrator is a full-length recombinant protein expressed in *E. coli*.
Antibodies: The U-PLEX NHP TGF-β1 Assay uses a mouse monoclonal antibody for capture and a chicken 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.