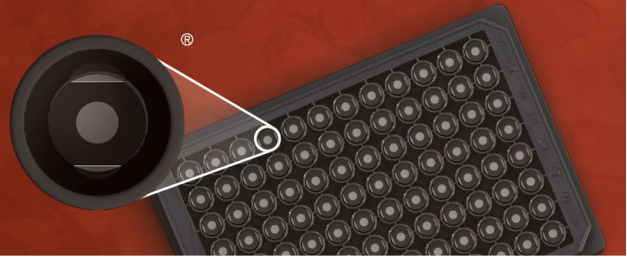
U-PLEX®

Human TGF-β1



www.mesoscale.com®

Ordering Information

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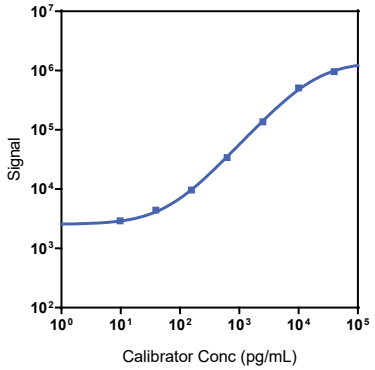
Product Options	Catalog Number	Description
Multiplex	K151ADM, K251ADM	U-PLEX Biomarker Group 2 (human)
Singleplex	K151XWK-1/-2/-4	U-PLEX Human TGF-β1 Assay with SECTOR™ plates
	K151XWK-21/-22/-24	U-PLEX Human TGF-β1 Assay with QuickPlex Ultra™ plates
	K251XWK-2/-4	U-PLEX Human TGF-β1 Assay with 384-well plates
Antibody Set	B20XW-2/-3	U-PLEX TGF-β1 Antibody Set
Protocol	U-PLEX product inserts are available at www.mesoscale.com	

The MESO SCALE DISCOVERY® 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® Human TGF-β1 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 on 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/Y2 weighting. The lower limit of detection (LLOD) is a calculated concentration corresponding to 2.5 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.

Tested Samples

Sample Type	Serum (N=10)	Plasma (N=10)
Median (pg/mL)	1,160	2,130
Range (pg/mL)	426-10,700	864-5,110
% Detected	100	100

Normal human serum and EDTA plasma samples were tested without dilution prior to the assay. Samples were prepared using an acidification step.

Dilution Linearity

Serum			EDTA Plasma			Cell Culture Media		
Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
2	136	125-157	123	105-143	114	105-125	136	125-157
4	148	131-169	134	108-152	114	104-125	148	131-169
8	155	142-171	139	106-154	118	106-139	155	142-171

Normal human 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		EDTA Plasma		Cell Culture Media	
Spike Level	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
High	72	61-86	57	51-67	70	61-86
Mid	70	64-81	58	48-68	69	63-81
Low	67	59-78	53	47-65	66	59-78

Normal human 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

Specificity

To assess specificity, the TGF-β1 Antibody Set was tested individually against a larger panel of analytes for nonspecific binding (TGF-β1, TGF-β2, 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 assay needs, customers may wish to test other diluents.

Assay Components

Calibrator: Human 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 Human 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.