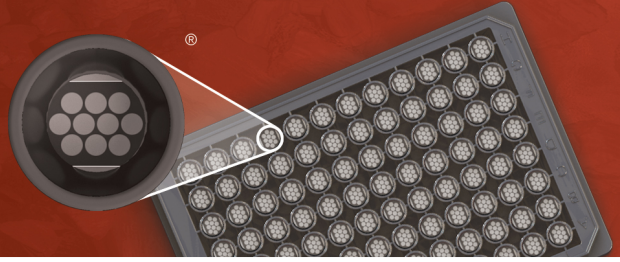
U-PLEX® Mouse TGF-β2 Assay



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Ordering Information

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Company Address

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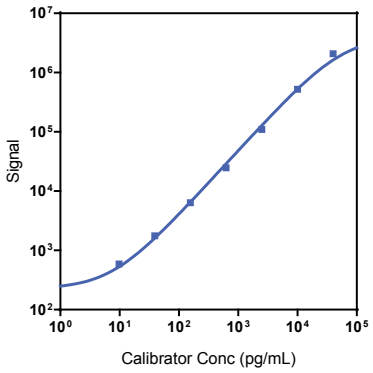
Product Options	Available in: TGF-β Combo (ms) K15242K
	Individual assay: K152XUK
	Antibody Set: B20XU
Assay Protocol	U-PLEX product inserts are provided with the assays, and are available at www.mesoscale.com/U-PLEX-documents.

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 Mouse TGF-β2 Assay tested on U-PLEX plates run as a multiplex. The data were generated during the development of the assay and do not represent the product specifications. Under your experimental conditions and with your specific multiplex, the assay may perform differently than the representative data shown. U-PLEX assays are available in multiplex format with other compatible assays. The same assay can also be used to detect a single analyte on MSD GOLD™ Small Spot Streptavidin plates.

Representative Calibration Curve and Sensitivity



Assay	Median LLOD (pg/mL)	LLOD Range (pg/mL)
TGF-β2	2.5	2.0-2.6

The calibration curves used to calculate analyte concentrations were established by fitting the signals from the Calibrators using a 4-parameter logistic (or sigmoidal dose-response) model with a $1/Y^2$ weighting. Analyte concentrations were determined from the electrochemiluminescence signals by back-fitting to the calibration curve. The lower limit of detection (LLOD) is a calculated concentration corresponding to the signal 2.5 standard deviations above the background (zero Calibrator).

Precision

	Control	Average Conc. (pg/mL)	Average Intra-run Conc. %CV	Inter-run Conc. %CV
TGF-β2	High	5,140	8.4	11.9
	Mid	519	8.6	11.9
	Low	72	8.3	11.5

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.

For Research Use Only. Not for use in diagnostic procedures.

Tested Samples

Sample Type	Serum	Plasma
Median (pg/mL)	95	101
Range (pg/mL)	28-218	36-120
% Detected	100	100

Samples were prepared using an acidification step. No TGF-β2 was detected in samples not treated with acid.

Normal mouse serum and EDTA plasma samples were tested without dilution prior to the assay.

Dilution Linearity

	Serum			Plasma			Cell Culture Media		
	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
TGF-β2	2	130	123-140	2	119	116-122	2	93	87-100
	4	139	129-154	4	134	131-137	4	88	83-92
	8	147	128-167	8	139	125-146	8	81	75-87

Normal mouse serum, EDTA plasma, and cell culture media were spiked with recombinant Calibrator and tested at different dilutions. Undiluted samples were tested to determine the expected concentration of the analyte. Samples may require 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
TGF-β2	High	53	46-58	56	53-61	117	112-125
	Mid	51	47-56	54	51-59	113	109-116
	Low	50	47-52	51	49-56	114	109-118

Normal mouse serum, EDTA plasma, and cell culture media were spiked with Calibrators at 3 levels. Undiluted samples were tested to determine the expected concentration of the analyte. Samples may require additional dilution with assay diluent to reduce matrix effects.
% Recovery = (measured concentration / expected concentration) x 100.

Specificity

To assess specificity, TGF-β2 Antibody Set was tested individually against a larger panel of recombinant mouse analytes for nonspecific binding (EPO, GM-CSF, IFN-γ, IL-1β, IL-2, IL-4, IL-5, IL-6, IL-9, IL-10, IL-12/IL-23p40, IL-12p70, IL-13, IL-15, IL-16, IL-17A, IL-17A/F, IL-17C, IL-17E/IL-25, IL-17F, IL-21, IL-22, IL-23, IL-27p28/IL-30, IL-31, IL-33, IP-10, KC/GRO, MCP-1, MIP-1α, MIP-1β, MIP-2, MIP-3α, TNF-α, and VEGF-A). Nonspecific binding was less than 0.5%. TGF-β2 assay may experience a small increase in signal when multiplexed with TGF-β3 assay due to interaction between capture antibodies.
Nonspecificity = (nonspecific signal / specific signal) x 100.

Diluent Compatibility

The data included in this document has been collected using Assay Diluent 41 and Antibody Diluent 45. 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-β2 is included in Calibrator 11 blend. The human TGF-β2 Calibrator is a full-length recombinant human protein expressed in *E. coli*.
Antibodies: The U-PLEX Mouse TGF-β2 Assay uses mouse monoclonal antibody for capture and 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.