U-PLEX®

Human sTfR-1

Product Options	Catalog Number	Description
Multiplex	K151AGM, K251AGM	U-PLEX Biomarker Group 3 (human)
Singleplex	K151P9K-1/-2/-4	U-PLEX Human sTfR-1 Assay with SECTOR™ plates
	K151P9K-21/-22/-24	U-PLEX Human sTfR-1 Assay with QuickPlex Ultra™ plates
	K251P9K-2/-4	U-PLEX Human sTfR-1 Assay with 384-well plates
Antibody Set	B21P9-2/-3	U-PLEX Human sTfR-1 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 sTfR-1 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 in 96- or 384-well plates. See a U-PLEX product insert for instrument compatibility.

Representative Calibration Curve and Sensitivity
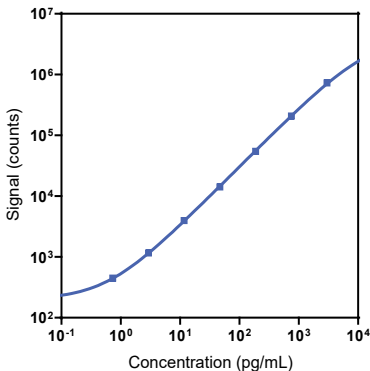
Assay	Median LLOD (pg/mL)	LLOD Range (pg/mL)
sTfR-1	0.29	0.28-0.29

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 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)
High	301	5.7	5.3
Mid	96	2.1	3.5
Low	24	2.2	6.9

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.

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Tested Samples

Sample Type	Serum (N=10)	EDTA Plasma (N=10)	Citrate Plasma (N=5)
Median (µg/mL)	1.4	0.88	1.3
Range (µg/mL)	0.91-2.4	0.39-1.1	1.2-2.3
% Detected	100	100	100

Normal serum, EDTA plasma, and citrate plasma samples were diluted 4,000-fold prior to the assay.

Parallelism

Serum			EDTA Plasma		
Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
2,000	104	95-134	2,000	100	97-105
8,000	107	97-143	8,000	103	101-105
16,000	109	94-144	16,000	105	97-115

Normal human serum and EDTA plasma were tested at different dilutions. Percent recovery at each dilution level was normalized to the concentration of 4,000-fold diluted samples.

% Recovery = (measured concentration / expected concentration) x 100

Specificity

To assess specificity, the sTfR-1 Antibody Set was tested individually against a larger panel of analytes for nonspecific binding (A2M, Adiponectin, ApoA1, ApoC3, CA1, Clusterin, Complement C9, Complement factor D, CRP, Cystatin C, DPPIV, Factor VII, ICAM-1, NGAL/LCN2, RBP4, SAA, Serpin A1, SHBG, sTfR-1, VCAM-1, vWF). Nonspecific binding was less than 0.5%.

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

Diluent Compatibility

The data included in this document have been collected with Assay Diluent 12 and Antibody Diluent 11. 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: sTfR-1 is included in Calibrator 25. The human sTfR-1 Calibrator is a full-length recombinant protein expressed in a mouse cell line.
Antibodies: The U-PLEX Human sTfR-1 Assay uses a mouse monoclonal antibody for capture and a mouse monoclonal antibody for detection.
Assay generation: A

Note: This datasheet contains representative assay performance data. In custom multiplex formats, the assay may perform differently from the representative data shown.

Note: MSD recommends that samples be diluted 4,000-fold prior to analysis in this assay.