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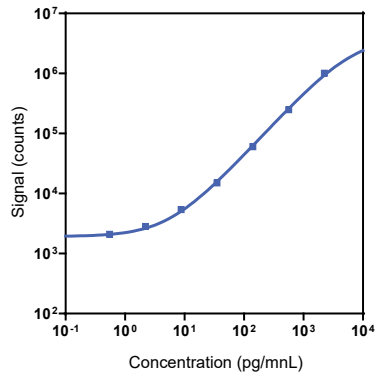
Company Address

MESO SCALE DISCOVERY[®]
 A division of
 Meso Scale Diagnostics, LLC.
 1601 Research Boulevard
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Product Options	Catalog Number	Description
Multiplex	K151AEL	U-PLEX Immuno-Oncology Group 1 (hu)
Singleplex	K151C8K-1/-2/-4	U-PLEX Human VEGF-D Assay with SECTOR [™] plates
	K151C8K-21/-22/-24	U-PLEX Human VEGF-D Assay with QuickPlex [®] plates
Antibody Set	B22C8-2/-3	U-PLEX Human VEGF-D 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 Human VEGF-D 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 available in multiplex format with other compatible assays. The same assay can also be used to detect a single analyte using MSD GOLD[™] Small Spot Streptavidin SECTOR or MSD GOLD Small Spot Streptavidin QuickPlex plates. See a U-PLEX product insert for instrument compatibility.

Representative Calibration Curve and Sensitivity



Assay	Median LLOD (pg/mL)	LLOD Range (pg/mL)
VEGF-D	0.30	0.22-0.76

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 2.5X the standard deviations above the background (zero Calibrator).

Precision

Control	Average Conc. (pg/mL)	Average Intra-run Conc. (%CV)	Inter-run Conc. (%CV)
High	280	3.8	6.8
Mid	51	5.1	13.7
Low	9.6	7.0	16.6

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.

MSD® U-PLEX Human VEGF-D

Tested Samples

Sample Type	Serum (N=10)	EDTA Plasma (N=10)	Normal Lysate (N=5)	Tumor Lysate (N=5)
Median (pg/mnL)	2,630	2,720	11	2.5
Range (pg/mnL)	510-5,250	883-3,840	0.60-38	ND-4.6
% Detected	100	100	100	80

ND = non-detectable (<LLOD). Normal serum and plasma samples were diluted 4-fold prior to the assay. Lysates were tested at a protein concentration of 0.5 mg/mL.

Dilution Linearity

Serum			EDTA Plasma		
Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
2	103	101-105	2	100	95-102
8	99	97-102	8	100	98-102
16	98	95-100	16	95	92-98

Normal human serum and EDTA plasma were spiked with Calibrator and tested at different dilutions. Percent recovery at each dilution level was normalized to the dilution-adjusted, 4-fold concentration. Samples may benefit from additional dilution with assay diluent to reduce matrix effects.

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

Spike Recovery

Spike Level	Serum		EDTA Plasma	
	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
High	92	83-100	102	96-109
Mid	94	90-99	100	92-113
Low	92	87-101	103	92-114

Normal serum and plasma were spiked with Calibrator at 3 levels. Spiked samples were diluted 4-fold 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, the VEGF-D Antibody Set was tested individually against a larger panel of analytes for nonspecific binding (BAFF, BAFF-R/TNFRSF13C, BCMA/TNFRSF17, BDNF, C-Peptide, CD20, CD27, CD28, CD40L (soluble), CD276/B7-H3, CTACK, CTLA-4, Desghrelin, ENA-78, Eotaxin, Eotaxin-2, Eotaxin 3, EPO, FGF (basic), FGF-23, FLT3L, Fractalkine, FSH, G-CSF, GITRL/TNFRSF18, GTR/TNFRSF18, Ghrelin (Ser3-octanoylated), gp130 (soluble), GIP (1-42), GIP (3-42), GLP-1 (7-36), GLP-1 (9-36), GM-CSF, Granzyme A, Granzyme B, GRO- α , HAVCR2/TIM-3, I-309, IFN- α 2a, IFN- β , IFN- γ , IL-1 α , IL-1 β , IL-1RA, IL-2, IL-2R α , IL-3, 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-17C, IL-17D, IL-17E/IL-25, IL-17F, IL-18, IL-21, IL-22, IL-23, IL-27, IL-29/IFN- λ 1, IL-31, IL-33, Insulin, IP-10, LAG3, Leptin, LH, MCP-1, MCP-2, MCP-4, M-CSF, MDC, MIF, MIP-1 α , MIP-1 β , MIP-5, OX40/TNFRSF4, PD1, PD-L1, PD-L2, PIGF, PP, Proinsulin, PYY (3-36), RANKL/TNFRSF11, SDF-1 α , Tie-2, TIGIT, TLR1, TNF- α , TNF- β , TPO, TRAIL, TSLP, VEGF-A, VEGF-C, VEGF-D, and YKL-40). Nonspecific binding was less than 0.5%.

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

Diluent Compatibility

The data included in this document has been collected with Assay Diluent 2 and Antibody Diluent 3. 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: VEGF-D is included in Calibrator 21. The human VEGF-D Calibrator is VEGF-D (93-201) expressed in an insect cell line.

Antibodies: The U-PLEX Human VEGF-D Assay uses a mouse monoclonal antibody for capture and a mouse monoclonal antibody for detection.

Assay generation: B

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

