

## CERTIFICATE OF ANALYSIS

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**Product Description:** V-PLEX® and V-PLEX Plus Angiogenesis Panel 1 (human) Kit  
**Kit Catalog Numbers:** K15190-Series; K151RZ-Series; K151KW-Series; K151MD-Series; K151ME-Series; K151LT-Series; K151LU-Series  
**Kit Lot Number:** K0081467  
**Expiration Date:** 31 May 2022

### Acceptance Data/ Percent Recovery Specifications:

Spot	Name	Calibrator		Angiogenesis Control 1		Angiogenesis Control 2		Angiogenesis Control 3	
		Recovery	CV	Recovery	CV	Recovery	CV	Recovery	CV
1	VEGF-A	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
2	VEGF-C	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
3	VEGF-D	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
4	Tie-2	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
5	Flt-1	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
6	PlGF	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
7	bFGF	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%

Spot	Name	LLOQ			ULOQ		
		Value	Recovery	CV	Value	Recovery	CV
1	VEGF-A	5.00	80% - 120%	< 20%	1510	80% - 120%	< 20%
2	VEGF-C	146	80% - 120%	< 20%	17500	80% - 120%	< 20%
3	VEGF-D	67.1	80% - 120%	< 20%	18800	80% - 120%	< 20%
4	Tie-2	396	80% - 120%	< 20%	63400	80% - 120%	< 20%
5	Flt-1	10.0	80% - 120%	< 25%	6410	80% - 120%	< 20%
6	PlGF	1.50	80% - 120%	< 25%	800	80% - 120%	< 25%
7	bFGF	2.60	80% - 120%	< 25%	1780	80% - 120%	< 20%

### Acceptance Data/ Non Specific Binding Specifications:

Spot	Name	VEGF-A	VEGF-C	VEGF-D	Tie-2	Flt-1
1	VEGF-A	NA	< 0.5%	< 0.5%	< 0.5%	< 10.0%
2	VEGF-C	< 0.5%	NA	< 0.5%	< 0.5%	< 0.5%
3	VEGF-D	< 0.5%	< 5.0%	NA	< 0.5%	< 0.5%
4	Tie-2	< 0.5%	< 0.5%	< 0.5%	NA	< 0.5%
5	Flt-1	< 10.0%	< 5.0%	< 0.5%	< 0.5%	NA
6	PlGF	< 0.5%	< 0.5%	< 0.5%	< 0.5%	< 0.5%
7	bFGF	< 0.5%	< 0.5%	< 0.5%	< 0.5%	< 0.5%

Spot	Name	PlGF	bFGF
1	VEGF-A	< 0.5%	< 0.5%
2	VEGF-C	< 0.5%	< 0.5%
3	VEGF-D	< 0.5%	< 0.5%
4	Tie-2	< 0.5%	< 0.5%
5	Flt-1	< 0.5%	< 0.5%
6	PlGF	NA	< 0.5%
7	bFGF	< 0.5%	NA

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### Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	VEGF-A	20X Calibrator	46700	pg/mL
		Angiogenesis Control 1	538	pg/mL
		Angiogenesis Control 2	99.8	pg/mL
		Angiogenesis Control 3	24.8	pg/mL
2	VEGF-C	20X Calibrator	534000	pg/mL
		Angiogenesis Control 1	6950	pg/mL
		Angiogenesis Control 2	1840	pg/mL
		Angiogenesis Control 3	614	pg/mL
3	VEGF-D	20X Calibrator	551000	pg/mL
		Angiogenesis Control 1	6530	pg/mL
		Angiogenesis Control 2	1060	pg/mL
		Angiogenesis Control 3	133	pg/mL
4	Tie-2	20X Calibrator	1920000	pg/mL
		Angiogenesis Control 1	20200	pg/mL
		Angiogenesis Control 2	6770	pg/mL
		Angiogenesis Control 3	763	pg/mL
5	Flt-1	20X Calibrator	187000	pg/mL
		Angiogenesis Control 1	1800	pg/mL
		Angiogenesis Control 2	214	pg/mL
		Angiogenesis Control 3	32	pg/mL
6	PIGF	20X Calibrator	22500	pg/mL
		Angiogenesis Control 1	231	pg/mL
		Angiogenesis Control 2	53.5	pg/mL
		Angiogenesis Control 3	15.9	pg/mL
7	bFGF	20X Calibrator	50200	pg/mL
		Angiogenesis Control 1	567	pg/mL
		Angiogenesis Control 2	64.7	pg/mL
		Angiogenesis Control 3	7.85	pg/mL

Controls tested may not be the same lot as shipped.

Concentrations provided in this table refer to the stock concentration of the calibrators. For top of the standard curve concentrations, please refer to the Standard Curve Data

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**Standard Curve Data:**

VEGF-A - Spot 1		
Conc. pg/mL	ECL Signal	%CV
2340	955,000	2.5
584	229,000	2.2
146	53,700	3.0
36.5	13,100	2.2
9.12	3,440	4.4
2.28	996	3.9
0.570	392	7.4
0.00	171	15.0

VEGF-C - Spot 2		
Conc. pg/mL	ECL Signal	%CV
26700	612,000	6.2
6680	112,000	5.2
1670	21,200	6.7
417	4,690	5.5
104	1,390	6.0
26.1	566	6.5
6.52	360	6.4
0.00	275	8.4

VEGF-D - Spot 3		
Conc. pg/mL	ECL Signal	%CV
27600	1,340,000	5.5
6890	505,000	6.4
1720	122,000	5.7
430	25,500	5.5
108	6,080	5.4
26.9	1,640	8.2
6.73	595	9.1
0.00	221	16.0

Tie-2 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
96000	105,000	4.1
24000	24,900	3.7
6000	6,150	3.8
1500	1,630	4.7
375	626	6.2
93.8	367	8.9
23.4	289	7.1
0.00	253	13.0

Flt-1 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
9350	344,000	2.1
2340	85,900	2.7
584	21,300	2.6
146	5,200	2.5
36.5	1,480	3.0
9.13	500	3.7
2.28	267	6.1
0.00	181	9.9

PlGF - Spot 6		
Conc. pg/mL	ECL Signal	%CV
1130	789,000	3.6
281	162,000	2.2
70.3	33,500	2.2
17.6	7,910	3.1
4.39	2,390	5.9
1.10	937	11.0
0.275	559	9.3
0.00	421	18.0

bFGF - Spot 7		
Conc. pg/mL	ECL Signal	%CV
2510	796,000	3.4
628	216,000	3.8
157	53,500	4.6
39.2	12,900	6.4
9.80	3,520	3.0
2.45	960	5.1
0.613	350	8.6
0.00	135	15.0

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**Components:**

Description	Lot Number	Storage Temperature	Expiration Date
Angiogenesis Panel 1 (human) Plate	Z0056689	2-8°C	30 Sep 2022
Anti-hu VEGF Antibody	D0081452	2-8°C	30 Jun 2023
Anti-hu VEGF-C Antibody	D0081491	2-8°C	31 Oct 2023
Anti-hu VEGF-D Antibody	D0081448	2-8°C	30 Jun 2023
Anti-hu Tie-2 Antibody	D0081449	2-8°C	30 Sep 2023
Anti-hu Flt-1 Antibody	D0081490	2-8°C	30 Sep 2023
Anti-hu PIGF Antibody	D0081450	2-8°C	30 Jun 2023
Anti-hu bFGF Antibody	D0081451	2-8°C	31 Aug 2023
Angiogenesis Panel 1 (human) Calibrator Blend	A0080213	≤ -70°C	31 May 2022
MSD Blocker A	Not Kit Specific	Not Kit Specific	N/A
Diluent 7	M0070062	≤ -10°C	31 May 2022
Diluent 11	M0110044	≤ -10°C	30 Jun 2022
MSD Read Buffer T	Not Kit Specific	Not Kit Specific	N/A

Additional Components Included in V-PLEX Plus	
MSD Wash Buffer (20X), 100mL	Not Kit Specific
Plate Seals	Not Kit Specific
Angiogenesis Control 1	Not Kit Specific
Angiogenesis Control 2	Not Kit Specific
Angiogenesis Control 3	Not Kit Specific

**Statement:**

The above product is intended for Research Use Only. Not for use in Diagnostic Procedures.

	Name	Function	Signature	Date
<b>Review/Approval</b>	Karen Hamilla	Quality		30 JUL 2020