

## CERTIFICATE OF ANALYSIS

Page 1 of 4

**Product Description:** V-PLEX® and V-PLEX Plus Angiogenesis Panel 1 (human) Kit  
**Kit Catalog Numbers:** K15190-Series; K151RZ-Series; K151KW-Series  
**Kit Lot Number:** K0081380  
**Expiration Date:** 30 Apr 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	PIGF	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	PIGF	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	PIGF	< 0.5%	< 0.5%	< 0.5%	< 0.5%	< 0.5%
7	bFGF	< 0.5%	< 0.5%	< 0.5%	< 0.5%	< 0.5%

Spot	Name	PIGF	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	PIGF	NA	< 0.5%
7	bFGF	< 0.5%	NA

## CERTIFICATE OF ANALYSIS

Page 2 of 4

### 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	98.2	pg/mL
		Angiogenesis Control 3	24.8	pg/mL
2	VEGF-C	20X Calibrator	534000	pg/mL
		Angiogenesis Control 1	6940	pg/mL
		Angiogenesis Control 2	1810	pg/mL
		Angiogenesis Control 3	610	pg/mL
3	VEGF-D	20X Calibrator	551000	pg/mL
		Angiogenesis Control 1	6620	pg/mL
		Angiogenesis Control 2	1090	pg/mL
		Angiogenesis Control 3	132	pg/mL
4	Tie-2	20X Calibrator	1920000	pg/mL
		Angiogenesis Control 1	20000	pg/mL
		Angiogenesis Control 2	6540	pg/mL
		Angiogenesis Control 3	730	pg/mL
5	Flt-1	20X Calibrator	187000	pg/mL
		Angiogenesis Control 1	1710	pg/mL
		Angiogenesis Control 2	206	pg/mL
		Angiogenesis Control 3	31.2	pg/mL
6	PIGF	20X Calibrator	22500	pg/mL
		Angiogenesis Control 1	231	pg/mL
		Angiogenesis Control 2	51.7	pg/mL
		Angiogenesis Control 3	15.3	pg/mL
7	bFGF	20X Calibrator	50200	pg/mL
		Angiogenesis Control 1	545	pg/mL
		Angiogenesis Control 2	62	pg/mL
		Angiogenesis Control 3	7.46	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

## CERTIFICATE OF ANALYSIS

Page 3 of 4

### Standard Curve Data:

VEGF-A - Spot 1		
Conc. pg/mL	ECL Signal	%CV
2340	846,000	3.2
584	207,000	2.2
146	49,800	1.8
36.5	12,200	1.5
9.12	3,250	3.6
2.28	926	3.0
0.570	346	3.9
0.00	146	11.0

VEGF-C - Spot 2		
Conc. pg/mL	ECL Signal	%CV
26700	642,000	5.8
6680	117,000	4.0
1670	21,700	6.0
417	4,730	6.9
104	1,360	7.7
26.1	545	8.0
6.52	333	7.6
0.00	252	8.2

VEGF-D - Spot 3		
Conc. pg/mL	ECL Signal	%CV
27600	1,240,000	6.0
6890	454,000	9.6
1720	105,000	6.6
430	21,200	5.3
108	4,830	8.2
26.9	1,250	7.4
6.73	449	6.1
0.00	166	9.1

Tie-2 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
96000	115,000	3.8
24000	27,000	3.6
6000	6,950	4.8
1500	1,800	6.0
375	619	4.2
93.8	310	4.8
23.4	237	5.4
0.00	200	6.8

Flt-1 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
9350	387,000	3.3
2340	99,200	2.8
584	25,000	3.8
146	6,170	3.6
36.5	1,720	1.7
9.13	565	4.0
2.28	290	5.7
0.00	193	11.0

PlGF - Spot 6		
Conc. pg/mL	ECL Signal	%CV
1130	873,000	4.4
281	179,000	3.4
70.3	36,700	2.6
17.6	8,560	3.2
4.39	2,730	4.3
1.10	1,060	6.3
0.275	703	9.7
0.00	648	15.0

bFGF - Spot 7		
Conc. pg/mL	ECL Signal	%CV
2510	769,000	5.5
628	212,000	6.6
157	54,400	4.3
39.2	13,200	6.6
9.80	3,710	6.6
2.45	1,070	4.9
0.613	387	11.0
0.00	236	37.0

## CERTIFICATE OF ANALYSIS

Page 4 of 4


### Components:

Description	Lot Number	Storage Temperature	Expiration Date
Angiogenesis Panel 1 (human) Plate	Z0056632	2-8°C	31 May 2022
Anti-hu VEGF Antibody	D0081369	2-8°C	30 Apr 2023
Anti-hu VEGF-C Antibody	D0081370	2-8°C	31 May 2023
Anti-hu VEGF-D Antibody	D0081422	2-8°C	30 Apr 2023
Anti-hu Tie-2 Antibody	D0081366	2-8°C	31 Mar 2023
Anti-hu Flt-1 Antibody	D0081423	2-8°C	31 May 2023
Anti-hu PIGF Antibody	D0081367	2-8°C	31 May 2023
Anti-hu bFGF Antibody	D0081368	2-8°C	31 May 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	M0070061	≤ -10°C	30 Apr 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	
Plate Seals	Not Kit Specific
Wash Buffer (20X), 100mL	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		03 FEB 2020