

## 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  
**Kit Lot Number:** K0081271  
**Expiration Date:** 31 Mar 2021

**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	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	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	VEGF-C	VEGF-D	Tie-2	Flt-1
1	VEGF	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%

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Spot	Name	PIGF	bFGF
1	VEGF	< 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

\* See Additional Comments.

### Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	VEGF	20X Calibrator	49000	pg/mL
		Angiogenesis Control 1	444	pg/mL
		Angiogenesis Control 2	89.4	pg/mL
		Angiogenesis Control 3	16.6	pg/mL
2	VEGF-C	20X Calibrator	492000	pg/mL
		Angiogenesis Control 1	5710	pg/mL
		Angiogenesis Control 2	1560	pg/mL
		Angiogenesis Control 3	380	pg/mL
3	VEGF-D	20X Calibrator	568000	pg/mL
		Angiogenesis Control 1	6720	pg/mL
		Angiogenesis Control 2	896	pg/mL
		Angiogenesis Control 3	92.2	pg/mL
4	Tie-2	20X Calibrator	1840000	pg/mL
		Angiogenesis Control 1	20000	pg/mL
		Angiogenesis Control 2	6480	pg/mL
		Angiogenesis Control 3	444	pg/mL
5	Flt-1	20X Calibrator	196600	pg/mL
		Angiogenesis Control 1	2310	pg/mL
		Angiogenesis Control 2	291	pg/mL
		Angiogenesis Control 3	27	pg/mL
6	PIGF	20X Calibrator	24200	pg/mL
		Angiogenesis Control 1	260	pg/mL
		Angiogenesis Control 2	61.6	pg/mL
		Angiogenesis Control 3	12.2	pg/mL
7	bFGF	20X Calibrator	49800	pg/mL
		Angiogenesis Control 1	559	pg/mL
		Angiogenesis Control 2	62.7	pg/mL
		Angiogenesis Control 3	5.88	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 - Spot 1		
Conc. pg/mL	ECL Signal	%CV
2450	502,000	3.7
613	111,000	2.8
153	24,000	2.2
38.3	5,660	2.1
9.57	1,540	3.3
2.39	527	2.6
0.598	266	5.1
0.00	191	10.0

VEGF-C - Spot 2		
Conc. pg/mL	ECL Signal	%CV
24600	483,000	4.7
6150	85,300	7.0
1540	17,000	5.6
384	3,920	5.8
96.1	1,220	4.6
24.0	513	4.7
6.01	343	3.4
0.00	285	3.7

VEGF-D - Spot 3		
Conc. pg/mL	ECL Signal	%CV
28400	1,420,000	6.4
7100	572,000	6.9
1780	146,000	7.0
444	32,400	5.5
111	7,520	7.2
27.7	1,990	3.4
6.93	646	4.6
0.00	209	5.8

Tie-2 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
92000	119,000	3.8
23000	27,700	3.1
5750	7,000	3.8
1440	1,830	2.7
359	653	4.1
89.8	345	5.3
22.5	270	6.5
0.00	297	23.0

Flt-1 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
9830	329,000	2.6
2460	84,900	3.2
614	21,400	2.9
154	5,320	3.0
38.4	1,490	2.5
9.60	544	3.9
2.40	291	4.2
0.00	206	4.8

PlGF - Spot 6		
Conc. pg/mL	ECL Signal	%CV
1210	664,000	3.1
303	162,000	3.0
75.6	37,300	1.9
18.9	9,250	1.8
4.73	2,660	2.5
1.18	1,060	5.9
0.295	605	6.5
0.00	486	11.0

bFGF - Spot 7		
Conc. pg/mL	ECL Signal	%CV
2490	625,000	4.5
623	176,000	5.0
156	46,100	4.9
38.9	11,600	4.3
9.73	3,210	4.5
2.43	1,070	12.0
0.608	492	20.0
0.00	276	41.0

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### Components:

Description	Lot Number	Storage Temperature	Expiration Date
Angiogenesis Panel 1 (human) Plate	Z0056452	2-8°C	31 Jul 2021
Anti-hu VEGF Antibody	D0081236	2-8°C	30 Jun 2022
Anti-hu VEGF-C Antibody	D0081237	2-8°C	30 Jun 2022
Anti-hu VEGF-D Antibody	D0081315	2-8°C	30 Nov 2022
Anti-hu Tie-2 Antibody	D0081233	2-8°C	30 Jun 2022
Anti-hu Flt-1 Antibody	D0081256	2-8°C	30 Nov 2022
Anti-hu PlGF Antibody	D0081234	2-8°C	30 Jun 2022
Anti-hu bFGF Antibody	D0081235	2-8°C	30 Jun 2022
Angiogenesis Panel 1 (human) Calibrator Blend	A0080185	≤ -70°C	31 Mar 2021
MSD Blocker A	Not Kit Specific	Not Kit Specific	N/A
Diluent 7	M0070057	≤ -10°C	31 May 2021
Diluent 11	M0110038	≤ -10°C	31 Jul 2021
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

### Additional Comments:

Assay	Spot	Specification	Comment
1 VEGF-C	2	NSB	VEGF-C NSB on VEGF-D: 5.87%

### Statement:

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

Review/Approval	Name	Function	Signature	Date
	Karen Hamilla	Quality		21 JUN 2019