

## CERTIFICATE OF ANALYSIS

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**Product Description:** V-PLEX® and V-PLEX Plus Proinflammatory Panel 1 (human) Kit

**Kit Catalog Numbers:** K15049-series, K15052-series, K15053-series

**Kit Lot Number:** K0080867

**Expiration Date:** 31 Jul 2019

### Acceptance Data/ Percent Recovery Specifications:

Spot	Name	Calibrator		Proinflammatory Panel 1 (Human) Control 1		Proinflammatory Panel 1 (Human) Control 2		Proinflammatory Panel 1 (Human) Control 3	
		Recovery	CV	Recovery	CV	Recovery	CV	Recovery	CV
1	hu IFN- $\gamma$	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
2	hu IL-1 $\beta$	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
3	hu IL-2	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
4	hu IL-4	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
5	hu IL-6	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
6	hu IL-8	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
7	hu IL-10	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
8	hu IL-12p70	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
9	hu IL-13	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
10	hu TNF- $\alpha$	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%

Spot	Name	LLOQ			ULOQ		
		Value	Recovery	CV	Value	Recovery	CV
1	hu IFN- $\gamma$	1.76	80% - 120%	< 20%	938	80% - 120%	< 20%
2	hu IL-1 $\beta$	0.650	80% - 120%	< 20%	375	80% - 120%	< 20%
3	hu IL-2	0.890	80% - 120%	< 20%	938	80% - 120%	< 20%
4	hu IL-4	0.220	80% - 120%	< 20%	158	80% - 120%	< 20%
5	hu IL-6	0.630	80% - 120%	< 20%	488	80% - 120%	< 20%
6	hu IL-8	0.590	80% - 120%	< 20%	375	80% - 120%	< 20%
7	hu IL-10	0.300	80% - 120%	< 20%	233	80% - 120%	< 20%
8	hu IL-12p70	1.22	80% - 120%	< 20%	315	80% - 120%	< 20%
9	hu IL-13	4.21	80% - 120%	< 20%	353	80% - 120%	< 20%
10	hu TNF- $\alpha$	0.690	80% - 120%	< 20%	248	80% - 120%	< 20%

### Acceptance Data/ Non Specific Binding Specifications:

Spot	Name	NSB Spec
1	hu IFN- $\gamma$	< 1.0%
2	hu IL-1 $\beta$	< 1.0%
3	hu IL-2	< 1.0%
4	hu IL-4	< 1.0%
5	hu IL-6	< 1.0%
6	hu IL-8	< 1.0%
7	hu IL-10	< 1.0%
8	hu IL-12p70	< 1.0%
9	hu IL-13	< 1.0%
10	hu TNF- $\alpha$	< 1.0%

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**Stock Concentration of Material Tested :**

Spot	Name	Item	Conc	Units
1	hu IFN- $\gamma$	Calibrator	1360	pg/ml
		Proinflammatory Panel 1 (Human) Control 1	682	pg/ml
		Proinflammatory Panel 1 (Human) Control 2	183	pg/ml
		Proinflammatory Panel 1 (Human) Control 3	52.3	pg/ml
2	hu IL-1 $\beta$	Calibrator	561	pg/ml
		Proinflammatory Panel 1 (Human) Control 1	215	pg/ml
		Proinflammatory Panel 1 (Human) Control 2	52	pg/ml
		Proinflammatory Panel 1 (Human) Control 3	11	pg/ml
3	hu IL-2	Calibrator	1430	pg/ml
		Proinflammatory Panel 1 (Human) Control 1	431	pg/ml
		Proinflammatory Panel 1 (Human) Control 2	42.3	pg/ml
		Proinflammatory Panel 1 (Human) Control 3	3.83	pg/ml
4	hu IL-4	Calibrator	244	pg/ml
		Proinflammatory Panel 1 (Human) Control 1	101	pg/ml
		Proinflammatory Panel 1 (Human) Control 2	20.3	pg/ml
		Proinflammatory Panel 1 (Human) Control 3	2.88	pg/ml
5	hu IL-6	Calibrator	697	pg/ml
		Proinflammatory Panel 1 (Human) Control 1	275	pg/ml
		Proinflammatory Panel 1 (Human) Control 2	50.7	pg/ml
		Proinflammatory Panel 1 (Human) Control 3	9.03	pg/ml
6	hu IL-8	Calibrator	576	pg/ml
		Proinflammatory Panel 1 (Human) Control 1	223	pg/ml
		Proinflammatory Panel 1 (Human) Control 2	40.4	pg/ml
		Proinflammatory Panel 1 (Human) Control 3	5.91	pg/ml
7	hu IL-10	Calibrator	359	pg/ml
		Proinflammatory Panel 1 (Human) Control 1	133	pg/ml
		Proinflammatory Panel 1 (Human) Control 2	27.8	pg/ml
		Proinflammatory Panel 1 (Human) Control 3	3.61	pg/ml
8	hu IL-12p70	Calibrator	482	pg/ml
		Proinflammatory Panel 1 (Human) Control 1	168	pg/ml
		Proinflammatory Panel 1 (Human) Control 2	33.2	pg/ml
		Proinflammatory Panel 1 (Human) Control 3	6.12	pg/ml
9	hu IL-13	Calibrator	478	pg/ml
		Proinflammatory Panel 1 (Human) Control 1	150	pg/ml
		Proinflammatory Panel 1 (Human) Control 2	46.7	pg/ml
		Proinflammatory Panel 1 (Human) Control 3	12.3	pg/ml
10	hu TNF- $\alpha$	Calibrator	364	pg/ml
		Proinflammatory Panel 1 (Human) Control 1	89.6	pg/ml
		Proinflammatory Panel 1 (Human) Control 2	18	pg/ml
		Proinflammatory Panel 1 (Human) Control 3	2.72	pg/ml

Controls tested may not be the same lot as shipped.

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### Standard Curve Data:

hu IFN- $\gamma$ - Spot 1		
Conc. pg/ml	ECL Signal	%CV
1360	250,000	2.0
340	66,000	2.0
85.0	16,700	2.1
21.3	4,250	4.3
5.31	1,310	2.1
1.33	610	3.7
0.332	427	8.8
0.00	346	7.1

hu IL-1 $\beta$ - Spot 2		
Conc. pg/ml	ECL Signal	%CV
561	1,830,000	1.6
140	484,000	1.2
35.1	123,000	1.8
8.77	30,100	2.0
2.19	8,730	2.5
0.548	3,080	2.4
0.137	1,720	3.0
0.00	1,210	3.1

hu IL-2 - Spot 3		
Conc. pg/ml	ECL Signal	%CV
1430	1,260,000	2.6
358	357,000	1.5
89.4	95,500	2.0
22.3	23,700	2.5
5.59	6,610	3.6
1.40	1,910	2.5
0.349	802	5.4
0.00	388	7.4

hu IL-4 - Spot 4		
Conc. pg/ml	ECL Signal	%CV
244	902,000	2.8
61.0	273,000	2.4
15.3	71,400	3.7
3.81	17,700	6.2
0.953	4,530	4.5
0.238	1,310	3.6
0.0596	438	6.2
0.00	156	16.0

hu IL-6 - Spot 5		
Conc. pg/ml	ECL Signal	%CV
697	1,320,000	2.8
174	312,000	2.5
43.6	67,600	2.6
10.9	15,000	3.0
2.72	3,890	1.8
0.681	1,070	2.4
0.170	400	4.8
0.00	167	13.0

hu IL-8 - Spot 6		
Conc. pg/ml	ECL Signal	%CV
576	702,000	1.5
144	186,000	1.6
36.0	46,900	2.6
9.00	11,300	4.1
2.25	3,230	2.3
0.563	982	1.9
0.141	422	5.9
0.00	247	9.7

hu IL-10 - Spot 7		
Conc. pg/ml	ECL Signal	%CV
359	696,000	1.5
89.8	202,000	1.6
22.4	52,500	2.0
5.61	12,700	3.1
1.40	3,530	2.0
0.351	1,100	2.7
0.0876	514	4.5
0.00	319	5.6

hu IL-12p70 - Spot 8		
Conc. pg/ml	ECL Signal	%CV
482	471,000	4.7
121	139,000	2.7
30.1	36,100	2.4
7.53	9,120	4.0
1.88	2,470	3.4
0.471	804	3.5
0.118	408	6.5
0.00	271	11.0

hu IL-13 - Spot 9		
Conc. pg/ml	ECL Signal	%CV
478	768,000	4.5
120	126,000	2.9
29.9	14,900	2.7
7.47	2,010	3.7
1.87	564	3.0
0.467	245	7.7
0.117	181	10.0
0.00	151	12.0

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hu TNF- $\alpha$ - Spot 10		
Conc. pg/ml	ECL Signal	%CV
364	398,000	2.4
91.0	91,700	2.0
22.8	22,500	3.5
5.69	5,450	3.3
1.42	1,720	2.5
0.355	689	3.8
0.0889	416	6.7
0.00	322	7.2


### Components:

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel-1 (Human) Plate	Z0046593	2-8°C	31 Jan 2020
Anti-Hu hu IFN- $\gamma$ Antibody	D0081003	2-8°C	30 Nov 2019
Anti hu IL-1 $\beta$ Antibody	D0080915	2-8°C	31 Jul 2019
Anti hu IL-2 Antibody	D0081011	2-8°C	31 Dec 2019
Anti hu IL-4 Antibody	D0080917	2-8°C	31 Jul 2019
Anti hu IL-6 Antibody	D0081006	2-8°C	30 Nov 2019
Anti hu IL-8 Antibody	D0081012	2-8°C	31 Dec 2019
Anti hu IL-10 Antibody	D0080920	2-8°C	31 Jul 2019
Anti hu IL-12p70 Antibody	D0080921	2-8°C	31 Jul 2019
Anti hu IL-13 Antibody	D0081009	2-8°C	30 Nov 2019
Anti hu TNF- $\alpha$ Antibody	D0081002	2-8°C	31 Oct 2019
Proinflammatory Panel-1 (Human) Calibrator Blend	A0080145	2-8°C	31 Aug 2022
Diluent 2	M0020096	$\leq$ -10°C	30 Nov 2019
Diluent 3	M0030078	$\leq$ -10°C	31 Jan 2020
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
Proinflammatory Panel 1 (Human) Control 1	Not Kit Specific
Proinflammatory Panel 1 (Human) Control 2	Not Kit Specific
Proinflammatory Panel 1 (Human) 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
Review/Approval	Dawn Stollar	Quality Assurance		15 SEP 2017