

## 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:** K0081067

**Expiration Date:** 31 Jan 2020

### 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 $\beta$	0.646	80% - 120%	< 20%	375	80% - 120%	< 20%
3	hu IL-2	0.890	80% - 120%	< 20%	938	80% - 120%	< 20%
4	hu IL-4	0.218	80% - 120%	< 20%	158	80% - 120%	< 20%
5	hu IL-6	0.633	80% - 120%	< 20%	488	80% - 120%	< 20%
6	hu IL-8	0.591	80% - 120%	< 20%	375	80% - 120%	< 20%
7	hu IL-10	0.298	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	1430	pg/mL
		Proinflammatory Panel 1 (human) Control 1	574	pg/mL
		Proinflammatory Panel 1 (human) Control 2	155	pg/mL
		Proinflammatory Panel 1 (human) Control 3	41.8	pg/mL
2	hu IL-1 $\beta$	Calibrator	576	pg/mL
		Proinflammatory Panel 1 (human) Control 1	202	pg/mL
		Proinflammatory Panel 1 (human) Control 2	50.4	pg/mL
		Proinflammatory Panel 1 (human) Control 3	10.7	pg/mL
3	hu IL-2	Calibrator	1470	pg/mL
		Proinflammatory Panel 1 (human) Control 1	400	pg/mL
		Proinflammatory Panel 1 (human) Control 2	41.2	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.48	pg/mL
4	hu IL-4	Calibrator	243	pg/mL
		Proinflammatory Panel 1 (human) Control 1	100	pg/mL
		Proinflammatory Panel 1 (human) Control 2	20.1	pg/mL
		Proinflammatory Panel 1 (human) Control 3	2.97	pg/mL
5	hu IL-6	Calibrator	764	pg/mL
		Proinflammatory Panel 1 (human) Control 1	264	pg/mL
		Proinflammatory Panel 1 (human) Control 2	41.2	pg/mL
		Proinflammatory Panel 1 (human) Control 3	8.24	pg/mL
6	hu IL-8	Calibrator	621	pg/mL
		Proinflammatory Panel 1 (human) Control 1	233	pg/mL
		Proinflammatory Panel 1 (human) Control 2	36.9	pg/mL
		Proinflammatory Panel 1 (human) Control 3	5.93	pg/mL
7	hu IL-10	Calibrator	340	pg/mL
		Proinflammatory Panel 1 (human) Control 1	125	pg/mL
		Proinflammatory Panel 1 (human) Control 2	23.3	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.47	pg/mL
8	hu IL-12p70	Calibrator	542	pg/mL
		Proinflammatory Panel 1 (human) Control 1	182	pg/mL
		Proinflammatory Panel 1 (human) Control 2	34	pg/mL
		Proinflammatory Panel 1 (human) Control 3	6.95	pg/mL
9	hu IL-13	Calibrator	525	pg/mL
		Proinflammatory Panel 1 (human) Control 1	164	pg/mL
		Proinflammatory Panel 1 (human) Control 2	46.4	pg/mL
		Proinflammatory Panel 1 (human) Control 3	12.9	pg/mL
10	hu TNF- $\alpha$	Calibrator	369	pg/mL
		Proinflammatory Panel 1 (human) Control 1	86.7	pg/mL
		Proinflammatory Panel 1 (human) Control 2	16	pg/mL
		Proinflammatory Panel 1 (human) Control 3	2.06	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
1430	254,000	1.3
358	68,100	2.3
89.4	17,300	3.6
22.3	4,510	3.3
5.59	1,480	2.2
1.40	728	3.2
0.349	532	4.8
0.00	461	5.3

hu IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
576	1,530,000	2.5
144	400,000	2.0
36.0	102,000	1.9
9.00	24,600	4.0
2.25	6,930	2.7
0.563	2,320	4.4
0.141	1,200	3.7
0.00	772	5.8

hu IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
1470	1,300,000	2.4
368	377,000	1.6
91.9	102,000	2.1
23.0	25,500	2.8
5.74	6,940	3.3
1.44	2,130	3.2
0.359	883	4.7
0.00	452	6.8

hu IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
243	822,000	3.4
60.8	254,000	2.7
15.2	68,900	2.4
3.80	17,400	2.8
0.949	4,370	4.9
0.237	1,250	3.8
0.0593	432	6.9
0.00	152	13.0

hu IL-6 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
764	1,540,000	2.1
191	379,000	1.8
47.8	84,100	2.5
11.9	19,200	3.0
2.98	4,780	2.7
0.746	1,320	2.6
0.187	454	2.8
0.00	162	14.0

hu IL-8 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
621	730,000	4.0
155	189,000	3.0
38.8	48,300	2.5
9.70	11,700	3.2
2.43	3,280	2.8
0.606	1,010	3.4
0.152	450	4.3
0.00	256	8.7

hu IL-10 - Spot 7		
Conc. pg/mL	ECL Signal	%CV
340	708,000	1.5
85.0	206,000	1.8
21.3	54,300	2.4
5.31	13,400	3.2
1.33	3,730	2.4
0.332	1,150	3.3
0.0830	519	5.5
0.00	289	8.5

hu IL-12p70 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
542	500,000	2.7
136	150,000	2.1
33.9	41,000	2.0
8.47	10,400	2.3
2.12	2,770	4.1
0.529	903	3.8
0.132	408	9.1
0.00	274	19.0

hu IL-13 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
525	1,300,000	1.6
131	236,000	1.9
32.8	32,500	2.4
8.20	4,940	3.7
2.05	1,240	2.6
0.513	412	4.7
0.128	218	9.9
0.00	142	19.0

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hu TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
369	347,000	2.9
92.3	84,700	3.3
23.1	21,600	3.3
5.77	5,220	3.6
1.44	1,620	4.1
0.360	623	5.7
0.0901	383	4.5
0.00	293	7.8


**Components:**

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (human) Plate	Z0046887	2-8°C	31 Jan 2021
Anti-hu IFN- $\gamma$ Antibody	D0081094	2-8°C	30 Nov 2021
Anti-hu IL-1 $\beta$ Antibody	D0081095	2-8°C	31 Dec 2021
Anti-hu IL-2 Antibody	D0081096	2-8°C	30 Nov 2021
Anti-hu IL-4 Antibody	D0081126	2-8°C	31 Jan 2022
Anti-hu IL-6 Antibody	D0081078	2-8°C	31 Oct 2021
Anti-hu IL-8 Antibody	D0081097	2-8°C	30 Nov 2021
Anti-hu IL-10 Antibody	D0081098	2-8°C	31 Jan 2022
Anti-hu IL-12p70 Antibody	D0081019	2-8°C	31 Jan 2020
Anti-hu IL-13 Antibody	D0081083	2-8°C	30 Sep 2021
Anti-hu TNF- $\alpha$ Antibody	D0081099	2-8°C	30 Nov 2021
Proinflammatory Panel 1 (human) Calibrator Blend	A0080178	2-8°C	31 Aug 2023
Diluent 2	M0020099	$\leq$ -10°C	31 Mar 2020
Diluent 3	M0030084	$\leq$ -10°C	31 Jan 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), 100 mL	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
<b>Review/Approval</b>	Dawn Stollar	Quality Assurance		18 OCT 2018