

## 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:** K0081027

**Expiration Date:** 30 Nov 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 $\beta$	0.646	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	1290	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	574	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	1440	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	227	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	765	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	341	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	511	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	497	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
1290	269,000	0.9
323	72,000	1.2
80.6	18,500	1.8
20.2	4,840	1.6
5.04	1,570	2.3
1.26	774	8.2
0.315	527	6.3
0.00	464	9.9

hu IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
574	1,500,000	2.2
144	416,000	1.2
35.9	106,000	1.4
8.97	26,600	1.7
2.24	7,480	1.6
0.561	2,460	2.2
0.140	1,160	3.5
0.00	731	7.8

hu IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
1440	1,250,000	1.9
360	365,000	0.9
90.0	98,500	2.0
22.5	24,800	2.4
5.63	6,800	2.9
1.41	1,930	2.7
0.352	734	5.0
0.00	334	8.4

hu IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
227	961,000	1.8
56.8	299,000	2.2
14.2	83,300	2.4
3.55	21,900	2.4
0.887	5,410	3.3
0.222	1,570	3.1
0.0554	514	4.8
0.00	179	20.0

hu IL-6 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
765	1,640,000	1.9
191	398,000	1.2
47.8	86,600	2.0
12.0	19,700	2.8
2.99	5,050	1.5
0.747	1,390	2.1
0.187	474	4.5
0.00	164	7.8

hu IL-8 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
621	1,150,000	1.7
155	281,000	6.3
38.8	70,200	2.2
9.70	17,100	3.1
2.43	4,670	1.6
0.606	1,330	2.5
0.152	487	4.2
0.00	222	17.0

hu IL-10 - Spot 7		
Conc. pg/mL	ECL Signal	%CV
341	674,000	1.2
85.3	198,000	1.1
21.3	53,200	1.7
5.33	13,300	2.4
1.33	3,700	1.7
0.333	1,170	2.0
0.0833	539	4.5
0.00	365	11.0

hu IL-12p70 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
511	465,000	2.4
128	144,000	1.9
31.9	39,000	1.6
7.98	10,100	2.8
2.00	2,700	2.9
0.499	885	4.5
0.125	420	12.0
0.00	312	29.0

hu IL-13 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
497	1,420,000	1.3
124	255,000	1.1
31.1	34,400	1.5
7.77	5,260	2.3
1.94	1,300	2.5
0.485	416	5.2
0.121	214	8.0
0.00	140	14.0

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hu TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
369	408,000	2.8
92.3	104,000	2.4
23.1	25,500	3.2
5.77	6,410	2.9
1.44	1,920	2.8
0.360	724	4.9
0.0901	423	5.2
0.00	317	9.6


**Components:**

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (human) Plate	Z0046848	2-8°C	30 Nov 2020
Anti-hu IFN- $\gamma$ Antibody	D0081014	2-8°C	31 Jan 2020
Anti-hu IL-1 $\beta$ Antibody	D0081091	2-8°C	31 Oct 2021
Anti-hu IL-2 Antibody	D0081036	2-8°C	29 Feb 2020
Anti-hu IL-4 Antibody	D0081005	2-8°C	30 Nov 2019
Anti-hu IL-6 Antibody	D0081078	2-8°C	31 Oct 2021
Anti-hu IL-8 Antibody	D0081037	2-8°C	29 Feb 2020
Anti-hu IL-10 Antibody	D0081024	2-8°C	31 Jan 2020
Anti-hu IL-12p70 Antibody	D0081008	2-8°C	30 Nov 2019
Anti-hu IL-13 Antibody	D0081092	2-8°C	31 Oct 2021
Anti-hu TNF- $\alpha$ Antibody	D0081065	2-8°C	30 Jun 2020
Proinflammatory Panel 1 (human) Calibrator Blend	A0080169	2-8°C	31 May 2023
Diluent 2	M0020099	$\leq$ -10°C	31 Mar 2020
Diluent 3	M0030082	$\leq$ -10°C	31 Oct 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), 1000mL	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		27 JUN 2018