

**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, K0015056-Series  
**Kit Lot Number:** K0081226  
**Expiration Date:** 31 Mar 2021

**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	IFN- $\gamma$	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
2	IL-1 $\beta$	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
3	IL-2	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
4	IL-4	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
5	IL-6	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
6	IL-8	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
7	IL-10	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
8	IL-12p70	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
9	IL-13	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
10	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	IFN- $\gamma$	1.76	80% - 120%	< 20%	938	80% - 120%	< 20%
2	IL-1 $\beta$	0.646	80% - 120%	< 20%	375	80% - 120%	< 20%
3	IL-2	0.890	80% - 120%	< 20%	938	80% - 120%	< 20%
4	IL-4	0.218	80% - 120%	< 20%	158	80% - 120%	< 20%
5	IL-6	0.633	80% - 120%	< 20%	488	80% - 120%	< 20%
6	IL-8	0.591	80% - 120%	< 20%	375	80% - 120%	< 20%
7	IL-10	0.298	80% - 120%	< 20%	233	80% - 120%	< 20%
8	IL-12p70	1.22	80% - 120%	< 20%	315	80% - 120%	< 20%
9	IL-13	4.21	80% - 120%	< 20%	353	80% - 120%	< 20%
10	TNF- $\alpha$	0.690	80% - 120%	< 20%	248	80% - 120%	< 20%

**Acceptance Data/ Non Specific Binding Specifications:**

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

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### Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	IFN- $\gamma$	Calibrator	1190	pg/mL
		Proinflammatory Panel 1 (human) Control 1	544	pg/mL
		Proinflammatory Panel 1 (human) Control 2	146	pg/mL
		Proinflammatory Panel 1 (human) Control 3	37.8	pg/mL
2	IL-1 $\beta$	Calibrator	564	pg/mL
		Proinflammatory Panel 1 (human) Control 1	218	pg/mL
		Proinflammatory Panel 1 (human) Control 2	51.8	pg/mL
		Proinflammatory Panel 1 (human) Control 3	11.9	pg/mL
3	IL-2	Calibrator	1510	pg/mL
		Proinflammatory Panel 1 (human) Control 1	419	pg/mL
		Proinflammatory Panel 1 (human) Control 2	39.6	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.66	pg/mL
4	IL-4	Calibrator	189	pg/mL
		Proinflammatory Panel 1 (human) Control 1	109	pg/mL
		Proinflammatory Panel 1 (human) Control 2	21.8	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.4	pg/mL
5	IL-6	Calibrator	767	pg/mL
		Proinflammatory Panel 1 (human) Control 1	273	pg/mL
		Proinflammatory Panel 1 (human) Control 2	48.4	pg/mL
		Proinflammatory Panel 1 (human) Control 3	8.11	pg/mL
6	IL-8	Calibrator	584	pg/mL
		Proinflammatory Panel 1 (human) Control 1	224	pg/mL
		Proinflammatory Panel 1 (human) Control 2	33.8	pg/mL
		Proinflammatory Panel 1 (human) Control 3	6.31	pg/mL
7	IL-10	Calibrator	355	pg/mL
		Proinflammatory Panel 1 (human) Control 1	136	pg/mL
		Proinflammatory Panel 1 (human) Control 2	25.3	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.81	pg/mL
8	IL-12p70	Calibrator	545	pg/mL
		Proinflammatory Panel 1 (human) Control 1	195	pg/mL
		Proinflammatory Panel 1 (human) Control 2	38.3	pg/mL
		Proinflammatory Panel 1 (human) Control 3	7.56	pg/mL
9	IL-13	Calibrator	518	pg/mL
		Proinflammatory Panel 1 (human) Control 1	172	pg/mL
		Proinflammatory Panel 1 (human) Control 2	47.3	pg/mL
		Proinflammatory Panel 1 (human) Control 3	12.6	pg/mL
10	TNF- $\alpha$	Calibrator	340	pg/mL
		Proinflammatory Panel 1 (human) Control 1	92.5	pg/mL
		Proinflammatory Panel 1 (human) Control 2	16.5	pg/mL
		Proinflammatory Panel 1 (human) Control 3	2.13	pg/mL

Controls tested may not be the same lot as shipped.

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### Standard Curve Data:

IFN- $\gamma$ - Spot 1		
Conc. pg/mL	ECL Signal	%CV
1190	170,000	1.3
298	44,000	2.9
74.4	11,200	2.9
18.6	2,980	3.7
4.65	1,030	2.7
1.16	537	4.6
0.291	397	7.4
0.00	356	10.0

IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
564	1,210,000	1.5
141	330,000	2.2
35.3	87,000	1.9
8.81	22,000	2.5
2.20	5,990	1.4
0.551	2,020	4.1
0.138	1,050	10.0
0.00	693	8.5

IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
1510	1,270,000	1.6
378	367,000	1.6
94.4	99,400	2.9
23.6	25,700	3.4
5.90	6,940	4.2
1.47	2,140	6.1
0.369	949	8.7
0.00	512	4.6

IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
189	733,000	3.7
47.3	218,000	2.7
11.8	60,200	2.1
2.95	15,500	2.9
0.738	3,950	2.9
0.185	1,140	4.4
0.0461	408	8.6
0.00	174	18.0

IL-6 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
767	1,350,000	3.0
192	328,000	1.8
47.9	73,500	2.8
12.0	17,300	4.0
3.00	4,330	2.2
0.749	1,210	2.8
0.187	439	4.0
0.00	180	10.0

IL-8 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
584	791,000	2.4
146	208,000	2.8
36.5	52,400	2.6
9.13	13,300	2.0
2.28	3,530	2.7
0.570	1,110	2.4
0.143	504	4.7
0.00	295	7.2

IL-10 - Spot 7		
Conc. pg/mL	ECL Signal	%CV
355	672,000	1.4
88.8	196,000	1.7
22.2	51,700	2.1
5.55	13,000	2.2
1.39	3,580	1.7
0.347	1,140	2.4
0.0867	544	6.2
0.00	339	6.9

IL-12p70 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
545	419,000	3.0
136	123,000	2.1
34.1	33,900	2.4
8.52	8,630	3.0
2.13	2,400	3.5
0.532	834	4.4
0.133	441	11.0
0.00	346	20.0

IL-13 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
518	1,130,000	2.6
130	201,000	1.8
32.4	27,500	1.7
8.09	4,480	3.0
2.02	1,180	3.0
0.506	436	5.0
0.126	259	9.9
0.00	206	13.0

TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
340	255,000	5.7
85.0	64,400	3.2
21.3	16,600	3.4
5.31	4,220	6.1
1.33	1,340	3.3
0.332	569	4.1
0.0830	369	6.2
0.00	312	6.4

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### Components:

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (human) Plate	Z0047058	2-8°C	30 Sep 2021
Anti-hu IFN- $\gamma$ Antibody	D0081180	2-8°C	31 Mar 2022
Anti-hu IL-1 $\beta$ Antibody	D0081182	2-8°C	30 Apr 2022
Anti-hu IL-2 Antibody	D0081167	2-8°C	28 Feb 2022
Anti-hu IL-4 Antibody	D0081183	2-8°C	30 Jun 2022
Anti-hu IL-6 Antibody	D0081210	2-8°C	30 Apr 2022
Anti-hu IL-8 Antibody	D0081168	2-8°C	30 Apr 2022
Anti-hu IL-10 Antibody	D0081211	2-8°C	31 May 2022
Anti-hu IL-12p70 Antibody	D0081161	2-8°C	31 Mar 2022
Anti-hu IL-13 Antibody	D0081092	2-8°C	31 Oct 2021
Anti-hu TNF- $\alpha$ Antibody	D0081228	2-8°C	31 May 2022
Proinflammatory Panel 1 (human) Calibrator Blend	A0080205	2-8°C	31 Mar 2024
Diluent 2	M0020103	$\leq$ -10°C	31 Mar 2021
Diluent 3	M0030087	$\leq$ -10°C	30 Jun 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
Review/Approval	Dawn Stollar	Quality		16 MAY 2019