

## CERTIFICATE OF ANALYSIS

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**Product Description:** V-PLEX® and V-PLEX Plus Proinflammatory Panel1 (human) Kit  
**Kit Catalog Numbers:** K151QR-Series; K151OD-Series; K15049-Series; K15052-Series; K15053-Series; K15056-Series; K15348-Series; K15349-Series; K15345-Series; K15346-Series  
**Kit Lot Number:** K0081492  
**Expiration Date:** 31 Oct 2022

### 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	1560	pg/mL
		Proinflammatory Panel 1 (human) Control 1	612	pg/mL
		Proinflammatory Panel 1 (human) Control 2	164	pg/mL
		Proinflammatory Panel 1 (human) Control 3	44.2	pg/mL
2	IL-1 $\beta$	Calibrator	583	pg/mL
		Proinflammatory Panel 1 (human) Control 1	235	pg/mL
		Proinflammatory Panel 1 (human) Control 2	55.9	pg/mL
		Proinflammatory Panel 1 (human) Control 3	11.9	pg/mL
3	IL-2	Calibrator	1250	pg/mL
		Proinflammatory Panel 1 (human) Control 1	390	pg/mL
		Proinflammatory Panel 1 (human) Control 2	39.8	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.46	pg/mL
4	IL-4	Calibrator	213	pg/mL
		Proinflammatory Panel 1 (human) Control 1	94.3	pg/mL
		Proinflammatory Panel 1 (human) Control 2	20	pg/mL
		Proinflammatory Panel 1 (human) Control 3	2.8	pg/mL
5	IL-6	Calibrator	663	pg/mL
		Proinflammatory Panel 1 (human) Control 1	255	pg/mL
		Proinflammatory Panel 1 (human) Control 2	47.2	pg/mL
		Proinflammatory Panel 1 (human) Control 3	7.83	pg/mL
6	IL-8	Calibrator	575	pg/mL
		Proinflammatory Panel 1 (human) Control 1	233	pg/mL
		Proinflammatory Panel 1 (human) Control 2	36.8	pg/mL
		Proinflammatory Panel 1 (human) Control 3	6.29	pg/mL
7	IL-10	Calibrator	346	pg/mL
		Proinflammatory Panel 1 (human) Control 1	134	pg/mL
		Proinflammatory Panel 1 (human) Control 2	25.5	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.93	pg/mL
8	IL-12p70	Calibrator	447	pg/mL
		Proinflammatory Panel 1 (human) Control 1	177	pg/mL
		Proinflammatory Panel 1 (human) Control 2	31.9	pg/mL
		Proinflammatory Panel 1 (human) Control 3	6.39	pg/mL
9	IL-13	Calibrator	466	pg/mL
		Proinflammatory Panel 1 (human) Control 1	164	pg/mL
		Proinflammatory Panel 1 (human) Control 2	45.2	pg/mL
		Proinflammatory Panel 1 (human) Control 3	12.1	pg/mL
10	TNF- $\alpha$	Calibrator	338	pg/mL
		Proinflammatory Panel 1 (human) Control 1	96.2	pg/mL
		Proinflammatory Panel 1 (human) Control 2	16.9	pg/mL
		Proinflammatory Panel 1 (human) Control 3	2.32	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
1560	363,000	1.9
390	101,000	1.3
97.5	25,800	1.8
24.4	6,580	2.6
6.09	1,750	3.9
1.52	651	4.6
0.381	353	7.2
0.00	244	10.0

IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
583	1,770,000	2.6
146	496,000	1.6
36.4	128,000	1.8
9.11	32,800	2.5
2.28	9,470	4.0
0.569	3,770	5.6
0.142	2,240	3.6
0.00	1,640	4.7

IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
1250	1,110,000	3.6
313	314,000	2.0
78.1	84,400	1.9
19.5	20,800	2.5
4.88	5,570	3.5
1.22	1,610	4.8
0.305	611	6.6
0.00	275	9.6

IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
213	885,000	2.5
53.3	272,000	2.9
13.3	73,100	2.0
3.33	18,600	4.9
0.832	4,560	3.9
0.208	1,330	3.5
0.0520	452	5.5
0.00	149	21.0

IL-6 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
663	1,040,000	2.7
166	246,000	2.5
41.4	53,800	2.0
10.4	12,400	3.4
2.59	3,170	3.4
0.647	968	4.4
0.162	397	5.6
0.00	205	20.0

IL-8 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
575	1,000,000	3.3
144	258,000	1.5
35.9	64,100	2.1
8.98	15,600	3.5
2.25	4,200	2.9
0.562	1,260	3.8
0.140	499	4.7
0.00	250	10.0

IL-10 - Spot 7		
Conc. pg/mL	ECL Signal	%CV
346	676,000	1.8
86.5	198,000	1.0
21.6	51,700	1.5
5.41	12,800	3.2
1.35	3,360	2.2
0.338	988	4.3
0.0845	374	7.7
0.00	185	20.0

IL-12p70 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
447	405,000	3.7
112	120,000	2.7
27.9	31,700	4.1
6.98	8,080	4.2
1.75	2,120	6.3
0.437	764	8.4
0.109	458	11.0
0.00	342	16.0

IL-13 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
466	843,000	2.2
117	143,000	2.1
29.1	18,400	2.2
7.28	2,810	3.2
1.82	783	2.3
0.455	329	9.4
0.114	225	14.0
0.00	179	15.0

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TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
338	393,000	4.2
84.5	99,700	3.1
21.1	24,900	2.8
5.28	6,210	4.0
1.32	1,760	3.0
0.330	703	11.0
0.0825	391	12.0
0.00	284	12.0


**Components:**

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (human) Plate	Z0047335	2-8°C	30 Nov 2022
Anti-hu IFN- $\gamma$ Antibody	D0081474	2-8°C	30 Nov 2023
Anti-hu IL-1 $\beta$ Antibody	D0081495	2-8°C	31 Oct 2023
Anti-hu IL-2 Antibody	D0081510	2-8°C	30 Sep 2023
Anti-hu IL-4 Antibody	D0081513	2-8°C	31 Dec 2023
Anti-hu IL-6 Antibody	D0081420	2-8°C	30 Apr 2023
Anti-hu IL-8 Antibody	D0081511	2-8°C	30 Sep 2023
Anti-hu IL-10 Antibody	D0081496	2-8°C	31 Oct 2023
Anti-hu IL-12p70 Antibody	D0081512	2-8°C	30 Sep 2023
Anti-hu IL-13 Antibody	D0081424	2-8°C	31 Jul 2023
Anti-hu TNF- $\alpha$ Antibody	D0081515	2-8°C	31 Oct 2023
Proinflammatory Panel 1 (human) Calibrator Blend	A0080262	2-8°C	30 Jun 2025
Diluent 2	M0020113	$\leq$ -10°C	30 Nov 2022
Diluent 3	M0030100	$\leq$ -10°C	31 Oct 2022
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	Karen Hamilla	Quality		06 AUG 2020