

## CERTIFICATE OF ANALYSIS

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**Product Description:** V-PLEX® and V-PLEX Plus Proinflammatory Panel 1 (human) Kit  
**Kit Catalog Numbers:** K151QR-Series, K151OD-Series, K15049-Series, K15052-Series, K15053-Series, K15056-Series, K15348-Series, K15346-Series, K15349-Series, K15345-Series  
**Kit Lot Number:** K0081418  
**Expiration Date:** 28 Feb 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	1550	pg/mL
		Proinflammatory Panel 1 (human) Control 1	546	pg/mL
		Proinflammatory Panel 1 (human) Control 2	167	pg/mL
		Proinflammatory Panel 1 (human) Control 3	32.2	pg/mL
2	IL-1 $\beta$	Calibrator	598	pg/mL
		Proinflammatory Panel 1 (human) Control 1	209	pg/mL
		Proinflammatory Panel 1 (human) Control 2	49.7	pg/mL
		Proinflammatory Panel 1 (human) Control 3	10	pg/mL
3	IL-2	Calibrator	1420	pg/mL
		Proinflammatory Panel 1 (human) Control 1	384	pg/mL
		Proinflammatory Panel 1 (human) Control 2	37.7	pg/mL
		Proinflammatory Panel 1 (human) Control 3	2.96	pg/mL
4	IL-4	Calibrator	256	pg/mL
		Proinflammatory Panel 1 (human) Control 1	109	pg/mL
		Proinflammatory Panel 1 (human) Control 2	20.2	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.11	pg/mL
5	IL-6	Calibrator	728	pg/mL
		Proinflammatory Panel 1 (human) Control 1	289	pg/mL
		Proinflammatory Panel 1 (human) Control 2	49.1	pg/mL
		Proinflammatory Panel 1 (human) Control 3	7.89	pg/mL
6	IL-8	Calibrator	571	pg/mL
		Proinflammatory Panel 1 (human) Control 1	220	pg/mL
		Proinflammatory Panel 1 (human) Control 2	33.2	pg/mL
		Proinflammatory Panel 1 (human) Control 3	5.42	pg/mL
7	IL-10	Calibrator	374	pg/mL
		Proinflammatory Panel 1 (human) Control 1	135	pg/mL
		Proinflammatory Panel 1 (human) Control 2	24.8	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.62	pg/mL
8	IL-12p70	Calibrator	493	pg/mL
		Proinflammatory Panel 1 (human) Control 1	158	pg/mL
		Proinflammatory Panel 1 (human) Control 2	31.4	pg/mL
		Proinflammatory Panel 1 (human) Control 3	5.92	pg/mL
9	IL-13	Calibrator	496	pg/mL
		Proinflammatory Panel 1 (human) Control 1	121	pg/mL
		Proinflammatory Panel 1 (human) Control 2	40.3	pg/mL
		Proinflammatory Panel 1 (human) Control 3	13.2	pg/mL
10	TNF- $\alpha$	Calibrator	392	pg/mL
		Proinflammatory Panel 1 (human) Control 1	110	pg/mL
		Proinflammatory Panel 1 (human) Control 2	16.4	pg/mL
		Proinflammatory Panel 1 (human) Control 3	2.37	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
1550	446,000	1.6
388	124,000	1.0
96.9	32,700	2.3
24.2	8,750	2.8
6.05	2,430	1.5
1.51	893	4.2
0.378	471	5.3
0.00	327	8.9

IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
598	1,860,000	2.0
150	532,000	2.2
37.4	143,000	1.8
9.34	38,700	2.1
2.34	11,400	2.6
0.584	4,290	2.6
0.146	2,450	4.4
0.00	1,890	6.8

IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
1420	1,250,000	2.1
355	361,000	1.4
88.8	100,000	1.8
22.2	27,000	2.6
5.55	7,800	1.9
1.39	2,520	1.9
0.347	1,250	3.0
0.00	773	5.3

IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
256	1,120,000	2.5
64.0	352,000	2.9
16.0	97,000	2.7
4.00	26,800	4.3
1.00	6,660	4.8
0.250	1,970	4.2
0.0625	653	7.7
0.00	203	11.0

IL-6 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
728	983,000	3.4
182	226,000	4.0
45.5	49,500	2.2
11.4	12,000	5.1
2.84	3,150	3.9
0.711	988	4.8
0.178	422	5.9
0.00	220	9.6

IL-8 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
571	965,000	3.3
143	249,000	2.0
35.7	62,700	2.2
8.92	16,500	1.9
2.23	4,360	2.8
0.558	1,290	3.8
0.139	493	6.7
0.00	221	11.0

IL-10 - Spot 7		
Conc. pg/mL	ECL Signal	%CV
374	837,000	2.0
93.5	252,000	1.5
23.4	69,000	1.8
5.84	18,300	1.7
1.46	5,010	1.9
0.365	1,510	3.5
0.0913	618	5.6
0.00	303	15.0

IL-12p70 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
493	416,000	3.7
123	127,000	3.4
30.8	34,700	3.9
7.70	9,350	5.6
1.93	2,670	8.1
0.481	1,010	10.0
0.120	574	19.0
0.00	304	15.0

IL-13 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
496	943,000	3.5
124	169,000	1.6
31.0	23,000	2.5
7.75	3,630	4.2
1.94	990	3.7
0.484	423	7.6
0.121	264	8.9
0.00	214	11.0

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TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
392	524,000	4.2
98.0	133,000	3.4
24.5	33,800	2.4
6.13	8,860	2.8
1.53	2,550	4.1
0.383	953	6.2
0.0957	520	12.0
0.00	331	14.0


### Components:

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (human) Plate	Z0047260	2-8°C	30 Jun 2022
Anti-hu IFN- $\gamma$ Antibody	D0081318	2-8°C	31 Mar 2023
Anti-hu IL-1 $\beta$ Antibody	D0081380	2-8°C	31 Mar 2023
Anti-hu IL-2 Antibody	D0081305	2-8°C	31 Oct 2022
Anti-hu IL-4 Antibody	D0081342	2-8°C	31 May 2023
Anti-hu IL-6 Antibody	D0081398	2-8°C	30 Apr 2023
Anti-hu IL-8 Antibody	D0081399	2-8°C	30 Jun 2023
Anti-hu IL-10 Antibody	D0081343	2-8°C	31 Jan 2023
Anti-hu 12p70 Antibody	D0081339	2-8°C	31 Jan 2023
Anti-hu IL-13 Antibody	D0081424	2-8°C	31 Jul 2023
Anti-hu TNF- $\alpha$ Antibody	D0081438	2-8°C	30 Jun 2023
Proinflammatory Panel 1 (human) Calibrator Blend	A0080231	2-8°C	31 Dec 2024
Diluent 2	M0020109	$\leq$ -10°C	28 Feb 2022
Diluent 3	M0030096	$\leq$ -10°C	30 Jun 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
<b>Review/Approval</b>	Karen Hamilla	Quality		17 APR 2020