

## 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:** K0081463  
**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	303,000	1.9
388	81,800	1.7
96.9	21,500	1.9
24.2	5,650	2.7
6.05	1,660	2.1
1.51	627	3.1
0.378	402	9.2
0.00	323	14.0

IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
598	1,310,000	2.1
150	371,000	2.0
37.4	99,100	2.6
9.34	26,100	2.7
2.34	8,120	3.8
0.584	3,300	2.6
0.146	2,090	5.5
0.00	1,740	6.3

IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
1420	782,000	4.5
355	227,000	2.4
88.8	60,800	2.0
22.2	15,600	3.0
5.55	4,500	2.5
1.39	1,480	3.2
0.347	805	6.8
0.00	530	11.0

IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
256	903,000	2.7
64.0	263,000	4.3
16.0	73,300	3.8
4.00	18,700	3.5
1.00	4,830	4.9
0.250	1,420	5.3
0.0625	608	12.0
0.00	321	26.0

IL-6 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
728	892,000	1.9
182	214,000	2.3
45.5	45,000	2.2
11.4	10,400	3.1
2.84	2,670	1.9
0.711	819	3.3
0.178	362	9.7
0.00	206	16.0

IL-8 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
571	780,000	2.3
143	195,000	2.9
35.7	49,300	2.9
8.92	12,600	2.0
2.23	3,410	2.6
0.558	1,060	4.6
0.139	477	8.2
0.00	266	12.0

IL-10 - Spot 7		
Conc. pg/mL	ECL Signal	%CV
374	634,000	1.6
93.5	191,000	1.5
23.4	51,800	1.8
5.84	13,300	2.2
1.46	3,650	2.2
0.365	1,120	2.9
0.0913	518	8.0
0.00	274	10.0

IL-12p70 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
493	335,000	4.3
123	98,000	3.9
30.8	26,700	2.7
7.70	6,690	5.0
1.93	1,880	3.5
0.481	617	3.9
0.120	283	4.9
0.00	187	14.0

IL-13 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
496	780,000	2.7
124	138,000	2.7
31.0	17,000	4.0
7.75	2,290	2.6
1.94	563	5.2
0.484	218	8.2
0.121	146	11.0
0.00	119	7.9

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TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
392	382,000	5.5
98.0	93,800	6.6
24.5	23,400	6.8
6.13	5,960	7.3
1.53	1,790	3.9
0.383	698	4.5
0.0957	406	9.6
0.00	320	18.0


### Components:

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (human) Plate	Z0047249	2-8°C	30 Jun 2022
Anti-hu IFN- $\gamma$ Antibody	D0081379	2-8°C	31 Mar 2023
Anti-hu IL-1 $\beta$ Antibody	D0081380	2-8°C	31 Mar 2023
Anti-hu IL-2 Antibody	D0081320	2-8°C	31 Dec 2022
Anti-hu IL-4 Antibody	D0081342	2-8°C	31 May 2023
Anti-hu IL-6 Antibody	D0081333	2-8°C	31 Jan 2023
Anti-hu IL-8 Antibody	D0081399	2-8°C	30 Jun 2023
Anti-hu IL-10 Antibody	D0081306	2-8°C	31 Oct 2022
Anti-hu IL-12p70 Antibody	D0081161	2-8°C	31 Mar 2022
Anti-hu IL-13 Antibody	D0081381	2-8°C	31 Mar 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	M0030094	$\leq$ -10°C	31 May 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		20 APR 2020