

### CERTIFICATE OF ANALYSIS

**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:** K0081035  
**Expiration Date:** 31 Jan 2020

**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%

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	1430	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	561	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	1430	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	750	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	616	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	337	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	550	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	513	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	346	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
1430	214,000	1.5
358	56,800	1.6
89.4	14,100	2.7
22.3	3,590	2.8
5.59	1,080	2.8
1.40	469	5.1
0.349	302	9.2
0.00	247	9.0

hu IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
561	1,290,000	2.9
140	352,000	1.9
35.1	88,700	1.7
8.77	22,200	2.0
2.19	6,020	2.7
0.548	1,880	3.5
0.137	861	3.5
0.00	507	9.1

hu IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
1430	1,220,000	1.8
358	343,000	1.2
89.4	93,300	1.8
22.3	23,600	2.7
5.59	6,460	5.7
1.40	1,790	1.7
0.349	727	4.9
0.00	338	6.5

hu IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
227	691,000	3.6
56.8	210,000	2.2
14.2	56,900	3.5
3.55	14,200	4.1
0.887	3,690	2.7
0.222	1,070	3.3
0.0554	364	5.2
0.00	141	12.0

hu IL-6 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
750	1,350,000	2.8
188	311,000	1.8
46.9	69,200	2.3
11.7	15,500	2.8
2.93	4,010	2.4
0.732	1,070	3.2
0.183	388	4.3
0.00	143	9.9

hu IL-8 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
616	931,000	4.4
154	229,000	3.9
38.5	56,500	2.7
9.63	14,200	3.1
2.41	3,770	2.5
0.602	1,110	3.0
0.150	447	5.4
0.00	234	6.8

hu IL-10 - Spot 7		
Conc. pg/mL	ECL Signal	%CV
337	577,000	1.5
84.3	169,000	1.8
21.1	44,400	2.0
5.27	11,100	2.2
1.32	3,090	1.7
0.329	984	3.0
0.0823	453	5.5
0.00	290	6.1

hu IL-12p70 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
550	445,000	3.3
138	134,000	1.9
34.4	35,400	2.1
8.59	9,090	3.3
2.15	2,410	2.6
0.537	772	4.1
0.134	336	7.3
0.00	223	14.0

hu IL-13 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
513	1,240,000	4.3
128	229,000	1.0
32.1	30,200	2.6
8.02	4,520	4.9
2.00	1,120	2.6
0.501	359	5.8
0.125	183	8.2
0.00	118	21.0

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hu TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
346	321,000	1.9
86.5	78,900	3.5
21.6	19,600	2.8
5.41	4,960	4.3
1.35	1,600	2.5
0.338	686	2.6
0.0845	473	5.3
0.00	402	9.5


### Components:

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (human) Plate	Z0046854	2-8°C	30 Nov 2020
Anti-hu IFN- $\gamma$ Antibody	D0081074	2-8°C	31 Aug 2021
Anti-hu IL-1 $\beta$ Antibody	D0081095	2-8°C	31 Dec 2021
Anti-hu IL-2 Antibody	D0081096	2-8°C	30 Nov 2021
Anti-hu IL-4 Antibody	D0081017	2-8°C	31 Jan 2020
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	D0081019	2-8°C	31 Jan 2020
Anti-hu IL-13 Antibody	D0081083	2-8°C	30 Sep 2021
Anti-hu TNF- $\alpha$ Antibody	D0081099	2-8°C	30 Nov 2021
Proinflammatory Panel 1 (human) Calibrator Blend	A0080172	2-8°C	30 Jun 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), 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>	Dawn Stollar	Quality Assurance		06 AUG 2018