

## 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

**Kit Lot Number:** K0081125

**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%

### Acceptance Data/ Non Specific Binding Specifications:

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	1290	pg/mL
		Proinflammatory Panel 1 (human) Control 1	512	pg/mL
		Proinflammatory Panel 1 (human) Control 2	132	pg/mL
		Proinflammatory Panel 1 (human) Control 3	40.9	pg/mL
2	hu IL-1 $\beta$	Calibrator	574	pg/mL
		Proinflammatory Panel 1 (human) Control 1	203	pg/mL
		Proinflammatory Panel 1 (human) Control 2	47.1	pg/mL
		Proinflammatory Panel 1 (human) Control 3	10.9	pg/mL
3	hu IL-2	Calibrator	1440	pg/mL
		Proinflammatory Panel 1 (human) Control 1	390	pg/mL
		Proinflammatory Panel 1 (human) Control 2	38.3	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.34	pg/mL
4	hu IL-4	Calibrator	227	pg/mL
		Proinflammatory Panel 1 (human) Control 1	102	pg/mL
		Proinflammatory Panel 1 (human) Control 2	20	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.05	pg/mL
5	hu IL-6	Calibrator	765	pg/mL
		Proinflammatory Panel 1 (human) Control 1	264	pg/mL
		Proinflammatory Panel 1 (human) Control 2	46.8	pg/mL
		Proinflammatory Panel 1 (human) Control 3	8.18	pg/mL
6	hu IL-8	Calibrator	621	pg/mL
		Proinflammatory Panel 1 (human) Control 1	235	pg/mL
		Proinflammatory Panel 1 (human) Control 2	36.2	pg/mL
		Proinflammatory Panel 1 (human) Control 3	5.93	pg/mL
7	hu IL-10	Calibrator	341	pg/mL
		Proinflammatory Panel 1 (human) Control 1	133	pg/mL
		Proinflammatory Panel 1 (human) Control 2	25.3	pg/mL
		Proinflammatory Panel 1 (human) Control 3	3.32	pg/mL
8	hu IL-12p70	Calibrator	511	pg/mL
		Proinflammatory Panel 1 (human) Control 1	186	pg/mL
		Proinflammatory Panel 1 (human) Control 2	35.6	pg/mL
		Proinflammatory Panel 1 (human) Control 3	6.99	pg/mL
9	hu IL-13	Calibrator	497	pg/mL
		Proinflammatory Panel 1 (human) Control 1	170	pg/mL
		Proinflammatory Panel 1 (human) Control 2	43.8	pg/mL
		Proinflammatory Panel 1 (human) Control 3	12.7	pg/mL
10	hu TNF- $\alpha$	Calibrator	369	pg/mL
		Proinflammatory Panel 1 (human) Control 1	92	pg/mL
		Proinflammatory Panel 1 (human) Control 2	17.2	pg/mL
		Proinflammatory Panel 1 (human) Control 3	2.53	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
1290	180,000	2.3
323	45,900	1.5
80.6	12,000	2.3
20.2	3,170	3.2
5.04	1,000	3.9
1.26	454	7.0
0.315	313	6.9
0.00	258	8.9

hu IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
574	1,130,000	4.4
144	317,000	2.4
35.9	83,900	2.9
8.97	21,500	2.3
2.24	6,060	1.2
0.561	2,020	2.7
0.140	1,080	2.9
0.00	735	4.2

hu IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
1440	966,000	3.0
360	268,000	2.9
90.0	72,000	3.2
22.5	18,100	5.0
5.63	5,070	4.5
1.41	1,410	5.0
0.352	583	5.1
0.00	273	8.5

hu IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
227	678,000	3.9
56.8	204,000	2.4
14.2	55,300	3.4
3.55	14,400	4.2
0.887	3,730	2.7
0.222	1,040	4.6
0.0554	350	7.3
0.00	121	16.0

hu IL-6 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
765	1,270,000	2.0
191	294,000	4.2
47.8	65,200	2.3
12.0	14,600	4.0
2.99	3,850	2.3
0.747	996	3.4
0.187	354	6.3
0.00	112	12.0

hu IL-8 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
621	602,000	4.0
155	157,000	4.2
38.8	41,200	2.3
9.70	10,300	3.7
2.43	2,750	2.1
0.606	776	3.7
0.152	314	5.7
0.00	145	15.0

hu IL-10 - Spot 7		
Conc. pg/mL	ECL Signal	%CV
341	525,000	3.0
85.3	153,000	1.5
21.3	40,500	1.8
5.33	10,400	1.9
1.33	2,810	1.4
0.333	846	3.6
0.0833	365	6.5
0.00	208	8.1

hu IL-12p70 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
511	398,000	7.8
128	116,000	5.0
31.9	31,700	5.4
7.98	8,030	9.3
2.00	2,290	5.8
0.499	741	6.0
0.125	382	9.0
0.00	216	18.0

hu IL-13 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
497	948,000	3.8
124	163,000	1.8
31.1	21,100	1.8
7.77	3,090	3.4
1.94	773	4.2
0.485	261	7.0
0.121	153	12.0
0.00	111	15.0

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hu TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
369	299,000	4.3
92.3	71,200	3.5
23.1	18,200	3.1
5.77	4,370	3.8
1.44	1,370	5.1
0.360	479	6.4
0.0901	277	7.8
0.00	197	17.0


### Components:

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (human) Plate	Z0046947	2-8°C	30 Apr 2021
Anti-hu IFN- $\gamma$ Antibody	D0081132	2-8°C	28 Feb 2022
Anti-hu IL-1 $\beta$ Antibody	D0081082	2-8°C	30 Sep 2021
Anti-hu IL-2 Antibody	D0081036	2-8°C	29 Feb 2020
Anti-hu IL-4 Antibody	D0081017	2-8°C	31 Jan 2020
Anti-hu IL-6 Antibody	D0081018	2-8°C	31 Jan 2020
Anti-hu IL-8 Antibody	D0081142	2-8°C	28 Feb 2022
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	D0081092	2-8°C	31 Oct 2021
Anti-hu TNF- $\alpha$ Antibody	D0081065	2-8°C	30 Jun 2020
Proinflammatory Panel 1 (human) Calibrator Blend	A0080169	2-8°C	31 May 2023
Diluent 2	M0020103	$\leq$ -10°C	31 Mar 2021
Diluent 3	M0030085	$\leq$ -10°C	28 Feb 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), 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		19 DEC 2018