



## CERTIFICATE OF ANALYSIS

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**Product Description:** V-PLEX® and V-PLEX Plus Proinflammatory Panel 1 (mouse) Kit  
**Kit Catalog Numbers:** K15048-Series  
**Kit Lot Number:** K0080755  
**Expiration Date:** 28 Feb 2019

### Acceptance Data/ Percent Recovery Specifications:

Spot	Name	Calibrator		Proinflammatory Panel 1 (mouse) Control 1		Proinflammatory Panel 1 (mouse) Control 2		Proinflammatory Panel 1 (mouse) Control 3	
		Recovery	CV	Recovery	CV	Recovery	CV	Recovery	CV
1	ms IFN- $\gamma$	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
2	ms IL-1 $\beta$	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
3	ms IL-2	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
4	ms IL-4	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
5	ms IL-5	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
6	ms IL-6	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
7	ms KC/GRO	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
8	ms IL-10	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
9	ms IL-12p70	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
10	ms TNF- $\alpha$	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%

Spot	Name	LLOQ			ULOQ		
		Value	Recovery	CV	Value	Recovery	CV
1	ms IFN- $\gamma$	0.390	75% - 125%	< 25%	570	75% - 125%	< 25%
2	ms IL-1 $\beta$	0.720	75% - 125%	< 25%	1030	75% - 125%	< 25%
3	ms IL-2	1.03	75% - 125%	< 25%	1570	75% - 125%	< 25%
4	ms IL-4	2.58	75% - 125%	< 25%	1060	75% - 125%	< 25%
5	ms IL-5	1.60	75% - 125%	< 25%	590	75% - 125%	< 25%
6	ms IL-6	7.61	75% - 125%	< 25%	3140	75% - 125%	< 25%
7	ms KC/GRO	3.29	75% - 125%	< 25%	1230	75% - 125%	< 25%
8	ms IL-10	19.8	75% - 125%	< 25%	2030	75% - 125%	< 25%
9	ms IL-12p70	179	75% - 125%	< 25%	20600	75% - 125%	< 25%
10	ms TNF- $\alpha$	0.980	75% - 125%	< 25%	403	75% - 125%	< 25%

### Acceptance Data/ Non Specific Binding Specifications:

Spot	Name	NSB Spec
1	ms IFN- $\gamma$	< 1.0%
2	ms IL-1 $\beta$	< 1.0%
3	ms IL-2	< 1.0%
4	ms IL-4	< 1.0%
5	ms IL-5	< 1.0%
6	ms IL-6	< 1.0%
7	ms KC/GRO	< 1.0%
8	ms IL-10	< 1.0%
9	ms IL-12p70	< 1.0%
10	ms TNF- $\alpha$	< 1.0%

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### Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	ms IFN- $\gamma$	Calibrator	933	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	280	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	21.5	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	1.88	pg/mL
2	ms IL-1 $\beta$	Calibrator	1720	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	673	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	49	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	4.47	pg/mL
3	ms IL-2	Calibrator	2720	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	897	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	63.4	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	5.02	pg/mL
4	ms IL-4	Calibrator	1700	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	437	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	60	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	13	pg/mL
5	ms IL-5	Calibrator	961	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	323	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	49.1	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	9.26	pg/mL
6	ms IL-6	Calibrator	5500	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	1590	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	247	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	40.1	pg/mL
7	ms KC/GRO	Calibrator	1920	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	651	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	108	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	17.7	pg/mL
8	ms IL-10	Calibrator	3070	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	1040	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	312	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	97.7	pg/mL
9	ms IL-12p70	Calibrator	31500	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	13400	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	3840	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	1120	pg/mL
10	ms TNF- $\alpha$	Calibrator	653	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	140	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	27.8	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	5.12	pg/mL

Controls tested may not be the same lot as shipped.

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### Standard Curve Data:

ms IFN- $\gamma$ - Spot 1		
Conc. pg/mL	ECL Signal	%CV
933	1,130,000	2.5
233	338,000	3.4
58.3	90,500	2.9
14.6	24,600	3.1
3.64	6,340	5.1
0.911	1,870	2.7
0.228	562	4.5
0.00	139	30.0

ms IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
1720	604,000	3.8
430	174,000	5.3
108	49,500	5.4
26.9	13,400	3.2
6.72	3,650	5.1
1.68	1,120	4.5
0.420	409	7.4
0.00	181	22.0

ms IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
2720	831,000	3.6
680	236,000	3.8
170	56,000	7.8
42.5	13,500	4.1
10.6	3,550	6.8
2.66	1,110	4.5
0.664	407	6.8
0.00	276	32.0

ms IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
1700	955,000	2.7
425	286,000	2.9
106	78,900	3.2
26.6	22,400	2.8
6.64	5,710	4.6
1.66	1,840	3.3
0.415	649	4.9
0.00	257	10.0

ms IL-5 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
961	1,370,000	3.4
240	332,000	3.2
60.1	83,000	4.3
15.0	21,800	2.8
3.75	5,670	3.0
0.938	1,660	2.8
0.235	523	4.8
0.00	146	17.0

ms IL-6 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
5500	684,000	2.0
1380	152,000	4.6
344	37,900	4.1
85.9	9,780	2.2
21.5	2,860	4.1
5.37	930	5.2
1.34	455	8.8
0.00	309	23.0

ms KC/GRO - Spot 7		
Conc. pg/mL	ECL Signal	%CV
1920	1,190,000	2.9
480	251,000	4.8
120	55,000	5.4
30.0	12,800	3.5
7.50	3,470	5.6
1.88	1,040	5.4
0.469	429	15.0
0.00	302	34.0

ms IL-10 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
3070	528,000	6.6
768	126,000	4.9
192	32,400	5.1
48.0	9,030	5.1
12.0	2,600	5.4
3.00	1,130	6.0
0.750	678	5.2
0.00	810	18.0

ms IL-12p70 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
31500	569,000	2.8
7880	103,000	5.8
1970	19,000	7.0
492	4,070	4.0
123	1,180	6.5
30.8	411	8.5
7.69	278	20.0
0.00	213	33.0

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ms TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
653	697,000	1.8
163	160,000	3.9
40.8	40,200	4.6
10.2	10,400	2.4
2.55	3,240	4.3
0.638	1,200	5.8
0.159	772	12.0
0.00	575	15.0


**Components:**

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (mouse) Plate	Z0046431	2-8°C	31 Aug 2019
Anti-ms IFN- $\gamma$ Antibody	D0080873	2-8°C	30 Jun 2019
Anti-ms IL-1 $\beta$ Antibody	D0080874	2-8°C	30 Jun 2019
Anti-ms IL-2 Antibody	D0080853	2-8°C	31 May 2019
Anti-ms IL-4 Antibody	D0080875	2-8°C	30 Jun 2019
Anti-ms IL-5 Antibody	D0080964	2-8°C	31 Aug 2019
Anti-ms IL-6 Antibody	D0080876	2-8°C	30 Jun 2019
Anti-ms KC/GRO Antibody	D0080877	2-8°C	30 Jun 2019
Anti-ms IL-10 Antibody	D0080878	2-8°C	30 Jun 2019
Anti-ms IL-12p70 Antibody	D0080879	2-8°C	30 Jun 2019
Anti-ms TNF- $\alpha$ Antibody	D0080860	2-8°C	31 May 2019
Proinflammatory Panel 1 (mouse) Calibrator Blend	A0080110	2-8°C	31 Dec 2021
Diluent 41	M0410015	$\leq$ -10°C	30 Jun 2019
Diluent 45	M0450012	$\leq$ -10°C	28 Feb 2019
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 (mouse) Control 1	Not Kit Specific
Proinflammatory Panel 1 (mouse) Control 2	Not Kit Specific
Proinflammatory Panel 1 (mouse) 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		12 APR 2017