

## 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:** K0080888

**Expiration Date:** 31 Mar 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	938	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	1710	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	2870	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	1740	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	969	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	5860	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	1980	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	3180	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	31100	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	674	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
938	1,100,000	1.9
235	312,000	2.3
58.6	77,800	2.5
14.7	19,800	2.6
3.66	4,900	3.8
0.916	1,370	3.3
0.229	429	5.9
0.00	128	19.0

ms IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
1710	495,000	3.3
428	142,000	3.0
107	38,400	3.6
26.7	9,880	3.4
6.68	2,600	4.0
1.67	751	4.8
0.417	292	6.0
0.00	137	11.0

ms IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
2870	797,000	7.0
718	220,000	4.1
179	52,700	3.9
44.8	12,400	5.3
11.2	3,190	6.5
2.80	908	4.4
0.701	356	8.0
0.00	170	12.0

ms IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
1740	935,000	2.5
435	275,000	2.3
109	73,700	2.2
27.2	19,400	3.4
6.80	5,060	3.7
1.70	1,490	3.1
0.425	549	5.3
0.00	254	8.7

ms IL-5 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
969	1,280,000	2.3
242	302,000	2.1
60.6	73,600	1.8
15.1	18,300	2.8
3.79	4,760	2.9
0.946	1,320	2.7
0.237	468	5.0
0.00	182	8.9

ms IL-6 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
5860	559,000	2.3
1470	123,000	2.3
366	29,400	2.8
91.6	7,480	2.1
22.9	2,150	3.7
5.72	735	4.0
1.43	385	5.7
0.00	271	6.9

ms KC/GRO - Spot 7		
Conc. pg/mL	ECL Signal	%CV
1980	1,260,000	3.0
495	277,000	2.5
124	60,400	2.8
30.9	13,400	2.8
7.73	3,440	4.0
1.93	928	4.1
0.483	340	9.2
0.00	137	19.0

ms IL-10 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
3180	669,000	5.1
795	158,000	3.9
199	39,700	3.7
49.7	10,100	3.6
12.4	2,760	3.7
3.11	943	8.3
0.776	493	11.0
0.00	349	13.0

ms IL-12p70 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
31100	726,000	3.5
7780	145,000	3.4
1940	26,300	2.9
486	5,380	2.7
121	1,410	3.1
30.4	438	6.7
7.59	211	9.8
0.00	130	19.0

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ms TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
674	578,000	2.6
169	133,000	3.5
42.1	32,100	2.8
10.5	7,970	2.8
2.63	2,290	4.5
0.658	794	5.3
0.165	440	8.9
0.00	336	19.0


**Components:**

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (mouse) Plate	Z0046644	2-8°C	28 Feb 2020
Anti-ms IFN- $\gamma$ Antibody	D0080960	2-8°C	31 Aug 2019
Anti-ms IL-1 $\beta$ Antibody	D0080961	2-8°C	30 Apr 2020
Anti-ms IL-2 Antibody	D0080786	2-8°C	31 Mar 2019
Anti-ms IL-4 Antibody	D0080854	2-8°C	31 May 2019
Anti-ms IL-5 Antibody	D0080964	2-8°C	31 Aug 2019
Anti-ms IL-6 Antibody	D0080965	2-8°C	31 Oct 2019
Anti-ms KC/GRO Antibody	D0080966	2-8°C	30 Sep 2019
Anti-ms IL-10 Antibody	D0080967	2-8°C	31 Oct 2019
Anti-ms IL-12p70 Antibody	D0080859	2-8°C	31 May 2019
Anti-ms TNF- $\alpha$ Antibody	D0080969	2-8°C	30 Sep 2019
Proinflammatory Panel 1 (mouse) Calibrator Blend	A0080138	2-8°C	31 May 2022
Diluent 41	M0410020	$\leq$ -10°C	29 Feb 2020
Diluent 45	M0450019	$\leq$ -10°C	31 Dec 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		14 NOV 2017