

## CERTIFICATE OF ANALYSIS

Page 1 of 4

**Product Description:** V-PLEX® and V-PLEX Plus Proinflammatory Panel 1 (mouse) Kit  
**Kit Catalog Numbers:** K15048-Series  
**Kit Lot Number:** K0080937  
**Expiration Date:** 31 Aug 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	Value	LLOQ		Value	ULOQ	
			Recovery	CV		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%

## CERTIFICATE OF ANALYSIS

Page 2 of 4

### Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	ms IFN- $\gamma$	Calibrator	644	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	467	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	32.2	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	2.15	pg/mL
2	ms IL-1 $\beta$	Calibrator	1510	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	741	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	53.8	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	4.48	pg/mL
3	ms IL-2	Calibrator	2980	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	919	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	54.8	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	5.84	pg/mL
4	ms IL-4	Calibrator	1670	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	480	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	62	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	15.9	pg/mL
5	ms IL-5	Calibrator	947	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	368	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	55.5	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	8.58	pg/mL
6	ms IL-6	Calibrator	4990	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	1052	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	167	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	31.5	pg/mL
7	ms KC/GRO	Calibrator	1870	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	695	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	116	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	17.7	pg/mL
8	ms IL-10	Calibrator	3530	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	1159	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	345	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	136	pg/mL
9	ms IL-12p70	Calibrator	30400	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	13486	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	3379	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	806	pg/mL
10	ms TNF- $\alpha$	Calibrator	662	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	166	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	29.9	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	4.93	pg/mL

Controls tested may not be the same lot as shipped.

# CERTIFICATE OF ANALYSIS

## Standard Curve Data:

ms IFN- $\gamma$ - Spot 1		
Conc. pg/mL	ECL Signal	%CV
644	944,000	2.1
161	279,000	2.3
40.3	70,200	2.6
10.1	17,900	3.3
2.52	4,610	2.3
0.629	1,340	2.4
0.157	434	7.7
0.00	162	20.0

ms IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
1510	413,000	3.2
378	118,000	5.0
94.4	31,500	4.1
23.6	7,900	5.5
5.90	2,190	5.2
1.47	663	5.8
0.369	262	8.7
0.00	130	15.0

ms IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
2980	899,000	4.8
745	255,000	4.9
186	59,400	4.2
46.6	13,800	3.8
11.6	3,730	4.1
2.91	1,160	3.6
0.728	503	4.5
0.00	266	9.9

ms IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
1670	977,000	2.3
418	277,000	4.1
104	74,400	2.7
26.1	19,100	2.6
6.52	4,990	3.9
1.63	1,480	1.7
0.408	529	4.9
0.00	236	9.5

ms IL-5 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
947	1,660,000	1.1
237	386,000	2.5
59.2	89,500	2.0
14.8	21,600	2.3
3.70	5,660	1.7
0.925	1,600	2.2
0.231	527	4.4
0.00	182	10.0

ms IL-6 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
4990	635,000	1.3
1250	142,000	2.2
312	33,400	1.7
78.0	8,380	2.1
19.5	2,380	2.4
4.87	792	2.9
1.22	375	5.2
0.00	239	6.9

ms KC/GRO - Spot 7		
Conc. pg/mL	ECL Signal	%CV
1870	1,530,000	3.1
468	346,000	3.2
117	71,900	2.7
29.2	15,600	2.6
7.30	4,060	3.5
1.83	1,120	3.0
0.457	393	4.8
0.00	145	11.0

ms IL-10 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
3530	808,000	3.8
883	198,000	3.7
221	46,400	2.9
55.2	11,900	5.1
13.8	3,130	5.1
3.45	1,150	8.7
0.862	570	17.0
0.00	475	25.0

ms IL-12p70 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
30400	679,000	2.5
7600	131,000	3.3
1900	22,500	3.5
475	4,590	3.0
119	1,240	2.6
29.7	406	5.8
7.42	208	8.7
0.00	134	14.0

## CERTIFICATE OF ANALYSIS

Page 4 of 4

ms TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
662	576,000	2.5
166	135,000	3.2
41.4	32,100	2.1
10.3	7,870	2.6
2.59	2,180	2.8
0.646	699	4.5
0.162	326	10.0
0.00	197	12.0


### Components:

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (mouse) Plate	Z0046717	2-8°C	30 Jun 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	D0080962	2-8°C	31 Dec 2019
Anti-ms IL-4 Antibody	D0080963	2-8°C	31 Oct 2019
Anti-ms IL-5 Antibody	D0081046	2-8°C	30 Apr 2020
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	D0081047	2-8°C	31 May 2020
Anti-ms TNF- $\alpha$ Antibody	D0081060	2-8°C	30 Jun 2020
Proinflammatory Panel 1 (mouse) Calibrator Blend	A0080152	2-8°C	30 Nov 2022
Diluent 41	M0410021	$\leq$ -10°C	30 Jun 2020
Diluent 45	M0450020	$\leq$ -10°C	31 May 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), 100 mL	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>	Jessica Drolet	Quality Assurance		17 May 2018