

CERTIFICATE OF ANALYSIS

Page 1 of 5

Product Description: V-PLEX® and V-PLEX Plus Proinflammatory Panel 1 (mouse) Kit
Kit Catalog Numbers: K15048-series
Kit Lot Number: K0080968
Expiration Date: 31 May 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- γ	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
2	ms IL-1 β	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- α	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- γ	0.390	75% - 125%	< 25%	570	75% - 125%	< 25%
2	ms IL-1 β	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- α	0.980	75% - 125%	< 25%	403	75% - 125%	< 25%

*See additional comments

Acceptance Data/ Non Specific Binding Specifications:

Spot	Name	NSB Spec
1	ms IFN- γ	< 1.0%
2	ms IL-1 β	< 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- α	< 1.0%

CERTIFICATE OF ANALYSIS

Page 2 of 5

Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	ms IFN- γ	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 β	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- α	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- γ - Spot 1		
Conc. pg/mL	ECL Signal	%CV
644	1,050,000	3.0
161	306,000	1.8
40.3	77,700	2.7
10.1	19,500	2.6
2.52	5,120	2.9
0.629	1,420	2.6
0.157	460	5.1
0.00	134	13.0

ms IL-1 β - Spot 2		
Conc. pg/mL	ECL Signal	%CV
1510	551,000	2.9
378	157,000	2.6
94.4	41,900	3.2
23.6	10,900	2.8
5.90	2,920	4.1
1.47	828	4.6
0.369	297	5.3
0.00	131	9.0

ms IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
2980	1,000,000	4.1
745	280,000	2.6
186	67,400	3.3
46.6	15,700	3.7
11.6	4,290	3.5
2.91	1,300	2.3
0.728	551	4.4
0.00	297	7.0

ms IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
1670	1,120,000	1.7
418	330,000	1.0
104	87,600	2.3
26.1	22,900	3.0
6.52	6,030	3.0
1.63	1,760	3.0
0.408	591	4.0
0.00	232	10.0

ms IL-5 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
947	1,740,000	2.0
237	408,000	1.7
59.2	95,000	3.3
14.8	23,300	3.4
3.70	6,220	2.4
0.925	1,720	3.2
0.231	571	4.4
0.00	187	7.7

ms IL-6 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
4990	648,000	2.1
1250	144,000	2.5
312	33,200	2.5
78.0	8,380	3.0
19.5	2,400	2.7
4.87	794	2.3
1.22	386	3.3
0.00	245	5.1

ms KC/GRO - Spot 7		
Conc. pg/mL	ECL Signal	%CV
1870	1,530,000	4.1
468	354,000	3.3
117	73,400	1.8
29.2	15,800	2.0
7.30	4,110	3.6
1.83	1,130	2.9
0.457	380	5.9
0.00	127	21.0

ms IL-10 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
3530	838,000	1.9
883	199,000	2.8
221	47,700	3.8
55.2	12,200	3.7
13.8	3,360	4.2
3.45	1,180	5.0
0.862	606	12.0
0.00	525	22.0

ms IL-12p70 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
30400	797,000	1.7
7600	164,000	2.4
1900	29,100	2.3
475	5,880	2.0
119	1,580	2.6
29.7	499	5.0
7.42	223	7.7
0.00	137	18.0

CERTIFICATE OF ANALYSIS

ms TNF- α - Spot 10		
Conc. pg/mL	ECL Signal	%CV
662	692,000	2.4
166	164,000	1.7
41.4	40,200	2.0
10.3	10,000	1.9
2.59	2,790	2.4
0.646	851	2.3
0.162	386	5.5
0.00	213	6.7

Components:

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (mouse) Plate	Z0046774	2-8°C	31 Aug 2020
Anti-ms IFN- γ Antibody	D0080960	2-8°C	31 Aug 2019
Anti-ms IL-1 β 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	D0080857	2-8°C	31 May 2019
Anti-ms IL-10 Antibody	D0080858	2-8°C	31 May 2019
Anti-ms IL-12p70 Antibody	D0081047	2-8°C	31 May 2020
Anti-ms TNF- α Antibody	D0081060	2-8°C	30 Jun 2020
Proinflammatory Panel 1 (mouse) Calibrator Blend	A0080152	2-8°C	30 Nov 2022
Diluent 41	M0410023	\leq -10°C	31 Aug 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

CERTIFICATE OF ANALYSIS

Additional Comments:

	Assay	Spot	Specification	Comment
1	ms IL-2	3	LLOQ Conc.	Some LLOQs recovered under specifications at 1.03 pg/mL. All specifications met at 1.80 pg/mL.
2	ms IL-2	3	LLOQ CV	Some LLOQs exceeded Conc CV specifications at 1.03 pg/mL. All specifications met at 1.80 pg/mL.

Statement:

The above product is intended for Research Use Only. Not for use in Diagnostic Procedures.

	Name	Function	Signature	Date
Review/Approval	Dawn Stollar	Quality Assurance	<i>Dawn Stollar</i>	07JUN2018