

CERTIFICATE OF ANALYSIS

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Product Description: V-PLEX® and V-PLEX Plus Cytokine Panel 1 (mouse) Kit
Kit Catalog Numbers: K15245-Series
Kit Lot Number: K0081040
Expiration Date: 31 Dec 2019

Acceptance Data/ Percent Recovery Specifications:

Spot	Name	Calibrator		Cytokine Panel 1 (mouse) Control 1		Cytokine Panel 1 (mouse) Control 2		Cytokine Panel 1 (mouse) Control 3	
		Recovery	CV	Recovery	CV	Recovery	CV	Recovery	CV
1	ms IL-9	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
2	ms MCP-1	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
3	ms IL-33	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
4	ms IL-27p28/IL-30	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
5	ms IL-15	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
6	ms IL-17A/F	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
7	ms MIP-1 α	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
8	ms IP-10	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
9	ms MIP-2	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%

Spot	Name	LLOQ			ULOQ		
		Value	Recovery	CV	Value	Recovery	CV
1	ms IL-9	21.9	75% - 125%	< 20%	2600	75% - 125%	< 20%
2	ms MCP-1	4.42	75% - 125%	< 20%	325	75% - 125%	< 20%
3	ms IL-33	1.85	75% - 125%	< 20%	1950	75% - 125%	< 20%
4	ms IL-27p28/IL-30	5.91	75% - 125%	< 20%	6500	75% - 125%	< 20%
5	ms IL-15	43.2	75% - 125%	< 20%	26000	75% - 125%	< 20%
6	ms IL-17A/F	1.39	75% - 125%	< 20%	1620	75% - 125%	< 20%
7	ms MIP-1 α	0.378	75% - 125%	< 20%	390	75% - 125%	< 20%
8	ms IP-10	2.15	75% - 125%	< 20%	650	75% - 125%	< 20%
9	ms MIP-2	0.577	75% - 125%	< 20%	423	75% - 125%	< 20%

Acceptance Data/ Non Specific Binding Specifications:

Spot	Name	NSB Spec
1	ms IL-9	< 1.0%
2	ms MCP-1	< 1.0%
3	ms IL-33	< 1.0%
4	ms IL-27p28/IL-30	< 1.0%
5	ms IL-15	< 1.0%
6	ms IL-17A/F	< 1.0%
7	ms MIP-1 α	< 1.0%
8	ms IP-10	< 1.0%
9	ms MIP-2	< 1.0%

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Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	ms IL-9	Calibrator	3970	pg/mL
		Cytokine Panel 1 (mouse) Control 1	3680	pg/mL
		Cytokine Panel 1 (mouse) Control 2	835	pg/mL
		Cytokine Panel 1 (mouse) Control 3	232	pg/mL
2	ms MCP-1	Calibrator	482	pg/mL
		Cytokine Panel 1 (mouse) Control 1	443	pg/mL
		Cytokine Panel 1 (mouse) Control 2	135	pg/mL
		Cytokine Panel 1 (mouse) Control 3	56	pg/mL
3	ms IL-33	Calibrator	3320	pg/mL
		Cytokine Panel 1 (mouse) Control 1	2430	pg/mL
		Cytokine Panel 1 (mouse) Control 2	286	pg/mL
		Cytokine Panel 1 (mouse) Control 3	38.3	pg/mL
4	ms IL-27p28/IL-30	Calibrator	10400	pg/mL
		Cytokine Panel 1 (mouse) Control 1	7620	pg/mL
		Cytokine Panel 1 (mouse) Control 2	1110	pg/mL
		Cytokine Panel 1 (mouse) Control 3	161	pg/mL
5	ms IL-15	Calibrator	38100	pg/mL
		Cytokine Panel 1 (mouse) Control 1	28500	pg/mL
		Cytokine Panel 1 (mouse) Control 2	4280	pg/mL
		Cytokine Panel 1 (mouse) Control 3	764	pg/mL
6	ms IL-17A/F	Calibrator	2530	pg/mL
		Cytokine Panel 1 (mouse) Control 1	2220	pg/mL
		Cytokine Panel 1 (mouse) Control 2	212	pg/mL
		Cytokine Panel 1 (mouse) Control 3	18.6	pg/mL
7	ms MIP-1 α	Calibrator	619	pg/mL
		Cytokine Panel 1 (mouse) Control 1	801	pg/mL
		Cytokine Panel 1 (mouse) Control 2	67.9	pg/mL
		Cytokine Panel 1 (mouse) Control 3	5.96	pg/mL
8	ms IP-10	Calibrator	910	pg/mL
		Cytokine Panel 1 (mouse) Control 1	947	pg/mL
		Cytokine Panel 1 (mouse) Control 2	245	pg/mL
		Cytokine Panel 1 (mouse) Control 3	77.9	pg/mL
9	ms MIP-2	Calibrator	635	pg/mL
		Cytokine Panel 1 (mouse) Control 1	563	pg/mL
		Cytokine Panel 1 (mouse) Control 2	67.5	pg/mL
		Cytokine Panel 1 (mouse) Control 3	9.71	pg/mL

Controls tested may not be the same lot as shipped.

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Standard Curve Data:

ms IL-9 - Spot 1		
Conc. pg/mL	ECL Signal	%CV
3970	692,000	3.4
993	187,000	2.8
248	38,700	3.5
62.0	9,850	3.4
15.5	3,550	7.2
3.88	2,040	6.4
0.969	1,560	7.2
0.00	1,570	11.0

ms MCP-1 - Spot 2		
Conc. pg/mL	ECL Signal	%CV
482	696,000	4.5
121	99,600	3.6
30.1	13,200	6.0
7.53	2,440	3.8
1.88	885	5.7
0.471	520	5.8
0.118	420	8.4
0.00	397	8.2

ms IL-33 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
3320	797,000	4.6
830	249,000	4.2
208	66,300	3.0
51.9	16,300	3.2
13.0	4,500	4.3
3.24	1,440	4.3
0.811	670	5.3
0.00	420	8.6

ms IL-27p28/IL-30 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
10400	678,000	3.2
2600	239,000	2.5
650	60,900	1.9
163	16,000	3.2
40.6	3,950	3.1
10.2	1,280	4.6
2.54	529	6.4
0.00	309	14.0

ms IL-15 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
38100	230,000	3.6
9530	88,900	4.5
2380	24,700	5.2
595	6,310	5.1
149	2,110	8.5
37.2	1,020	3.0
9.30	780	7.2
0.00	655	4.0

ms IL-17A/F - Spot 6		
Conc. pg/mL	ECL Signal	%CV
2530	876,000	3.9
633	234,000	3.9
158	55,900	3.7
39.5	13,600	4.6
9.88	3,820	4.7
2.47	1,190	4.5
0.618	528	5.9
0.00	319	6.5

ms MIP-1 α - Spot 7		
Conc. pg/mL	ECL Signal	%CV
619	1,110,000	2.8
155	261,000	2.6
38.7	59,300	3.2
9.67	14,500	3.8
2.42	3,990	1.8
0.604	1,330	3.3
0.151	663	5.2
0.00	446	10.0

ms IP-10 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
910	481,000	4.6
228	134,000	5.0
56.9	33,200	5.8
14.2	8,670	4.1
3.55	2,360	5.1
0.889	898	6.2
0.222	527	7.7
0.00	411	8.4

ms MIP-2 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
635	1,170,000	2.7
159	339,000	2.5
39.7	86,300	2.6
9.92	21,600	3.3
2.48	5,600	3.0
0.620	1,630	2.4
0.155	618	4.8
0.00	289	9.2

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Components:

Description	Lot Number	Storage Temperature	Expiration Date
Cytokine Panel 1 (mouse) Plate	Z0046860	2-8°C	31 Dec 2020
Anti-ms IL-9 Antibody	D0080988	2-8°C	31 Dec 2019
Anti-ms MCP-1 Antibody	D0081034	2-8°C	31 Mar 2020
Anti-ms IL-33 Antibody	D0081112	2-8°C	28 Feb 2022
Anti-ms IL-27p28/IL-30 Antibody	D0081113	2-8°C	31 Dec 2021
Anti-ms IL-15 Antibody	D0081114	2-8°C	31 Dec 2021
Anti-ms IL-17A/F Antibody	D0081115	2-8°C	31 Dec 2021
Anti-ms MIP-1 α Antibody	D0081116	2-8°C	31 Jan 2022
Anti-ms IP-10 Antibody	D0081117	2-8°C	31 Jan 2022
Anti-ms MIP-2 Antibody	D0081118	2-8°C	31 Dec 2021
Cytokine Panel 1 (mouse) Calibrator Blend	A0080135	2-8°C	30 Jun 2022
Diluent 41	M0410022	$\leq -10^{\circ}\text{C}$	31 Jul 2020
Diluent 45	M0450021	$\leq -10^{\circ}\text{C}$	30 Sep 2020
MSD Read Buffer T	Not Kit Specific	Not Kit Specific	N/A

Additional Components Included in V-PLEX Plus	
Wash Buffer (20X), 100 mL	Not Kit Specific
Plate Seals	Not Kit Specific
Cytokine Panel 1 (mouse) Control 1	Not Kit Specific
Cytokine Panel 1 (mouse) Control 2	Not Kit Specific
Cytokine 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
Review/Approval	Dawn Stollar	Quality Assurance		27 SEP 2018