

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: K0080721

Expiration Date: 31 Jul 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-1a	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-1a	0.378	75% - 125%	< 20%	390	80% - 120%	< 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-1a	< 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	3860	pg/mL
		Cytokine Panel 1 (mouse) Control 1	3670	pg/mL
		Cytokine Panel 1 (mouse) Control 2	893	pg/mL
		Cytokine Panel 1 (mouse) Control 3	209	pg/mL
2	ms MCP-1	Calibrator	491	pg/mL
		Cytokine Panel 1 (mouse) Control 1	479	pg/mL
		Cytokine Panel 1 (mouse) Control 2	153	pg/mL
		Cytokine Panel 1 (mouse) Control 3	55.3	pg/mL
3	ms IL-33	Calibrator	3280	pg/mL
		Cytokine Panel 1 (mouse) Control 1	2450	pg/mL
		Cytokine Panel 1 (mouse) Control 2	290	pg/mL
		Cytokine Panel 1 (mouse) Control 3	36.8	pg/mL
4	ms IL-27p28/IL-30	Calibrator	10500	pg/mL
		Cytokine Panel 1 (mouse) Control 1	8930	pg/mL
		Cytokine Panel 1 (mouse) Control 2	1290	pg/mL
		Cytokine Panel 1 (mouse) Control 3	203	pg/mL
5	ms IL-15	Calibrator	37600	pg/mL
		Cytokine Panel 1 (mouse) Control 1	28300	pg/mL
		Cytokine Panel 1 (mouse) Control 2	4180	pg/mL
		Cytokine Panel 1 (mouse) Control 3	705	pg/mL
6	ms IL-17A/F	Calibrator	2460	pg/mL
		Cytokine Panel 1 (mouse) Control 1	2230	pg/mL
		Cytokine Panel 1 (mouse) Control 2	211	pg/mL
		Cytokine Panel 1 (mouse) Control 3	19.1	pg/mL
7	ms MIP-1a	Calibrator	601	pg/mL
		Cytokine Panel 1 (mouse) Control 1	583	pg/mL
		Cytokine Panel 1 (mouse) Control 2	50.3	pg/mL
		Cytokine Panel 1 (mouse) Control 3	4.42	pg/mL
8	ms IP-10	Calibrator	898	pg/mL
		Cytokine Panel 1 (mouse) Control 1	923	pg/mL
		Cytokine Panel 1 (mouse) Control 2	240	pg/mL
		Cytokine Panel 1 (mouse) Control 3	65.5	pg/mL
9	ms MIP-2	Calibrator	646	pg/mL
		Cytokine Panel 1 (mouse) Control 1	559	pg/mL
		Cytokine Panel 1 (mouse) Control 2	66.4	pg/mL
		Cytokine Panel 1 (mouse) Control 3	10.6	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
3860	659,000	2.3
965	188,000	2.5
241	39,000	2.8
60.3	10,100	5.9
15.1	3,970	8.8
3.77	2,570	7.4
0.942	2,110	11.0
0.00	2,140	15.0

ms MCP-1 - Spot 2		
Conc. pg/mL	ECL Signal	%CV
491	826,000	4.0
123	109,000	3.5
30.7	13,200	4.8
7.67	2,190	3.9
1.92	687	5.1
0.479	359	5.6
0.120	282	6.5
0.00	246	6.0

ms IL-33 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
3280	818,000	3.5
820	257,000	3.4
205	67,500	2.3
51.3	17,000	2.4
12.8	4,550	3.0
3.20	1,400	2.3
0.801	624	2.2
0.00	350	6.4

ms IL-27p28/IL-30 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
10500	650,000	2.5
2630	236,000	2.4
656	61,800	2.3
164	15,700	1.9
41.0	4,000	2.9
10.3	1,240	3.1
2.56	500	8.8
0.00	291	14.0

ms IL-15 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
37600	275,000	3.2
9400	112,000	3.9
2350	30,400	4.4
588	6,970	3.7
147	1,940	3.3
36.7	745	3.5
9.18	442	5.4
0.00	341	6.9

ms IL-17A/F - Spot 6		
Conc. pg/mL	ECL Signal	%CV
2460	874,000	4.6
615	233,000	4.5
154	56,100	4.5
38.4	13,500	4.7
9.61	3,630	4.7
2.40	1,050	4.1
0.601	420	3.9
0.00	217	9.4

ms MIP-1a - Spot 7		
Conc. pg/mL	ECL Signal	%CV
601	1,650,000	2.4
150	436,000	2.0
37.6	107,000	3.4
9.39	25,700	3.0
2.35	6,850	2.7
0.587	2,010	2.5
0.147	874	3.6
0.00	464	4.4

ms IP-10 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
898	609,000	4.5
225	189,000	3.0
56.1	46,400	2.3
14.0	11,700	4.8
3.51	3,370	8.4
0.877	1,330	24.0
0.219	786	33.0
0.00	605	39.0

ms MIP-2 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
646	1,070,000	2.0
162	312,000	2.1
40.4	79,600	2.3
10.1	19,700	2.2
2.52	5,110	3.1
0.631	1,450	7.6
0.158	518	3.0
0.00	221	12.0

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Components:

Description	Lot Number	Storage Temperature	Expiration Date
Cytokine Panel 1 (mouse) Plate	Z0046394	2-8°C	31 Jul 2019
Anti-ms IL-9 Antibody	D0080934	2-8°C	31 Aug 2019
Anti-ms MCP-1 Antibody	D0080940	2-8°C	31 Aug 2019
Anti-ms IL-33 Antibody	D0080938	2-8°C	31 Aug 2019
Anti-ms IL-27p28/IL-30 Antibody	D0080937	2-8°C	31 Aug 2019
Anti-ms IL-15 Antibody	D0080935	2-8°C	31 Aug 2019
Anti-ms IL-17A/F Antibody	D0080936	2-8°C	31 Aug 2019
Anti-ms MIP-1α Antibody	D0080941	2-8°C	31 Aug 2019
Anti-ms IP-10 Antibody	D0080939	2-8°C	31 Aug 2019
Anti-ms MIP-2 Antibody	D0080942	2-8°C	31 Aug 2019
Cytokine Panel 1 (mouse) Calibrator Blend	A0080125	2-8°C	31 Mar 2022
Diluent 41	M0410016	≤ -10°C	31 Aug 2019
Diluent 45	M0450016	≤ -10°C	30 Sep 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
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		28 JUL 2017