

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: K0081230

Expiration Date: 31 May 2021

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	IL-9	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
2	MCP-1	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
3	IL-33	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
4	IL-27p28/IL-30	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
5	IL-15	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
6	IL-17A/F	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
7	MIP-1 α	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
8	IP-10	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
9	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	IL-9	21.9	75% - 125%	< 20%	2600	75% - 125%	< 20%
2	MCP-1	4.42	75% - 125%	< 20%	325	75% - 125%	< 20%
3	IL-33	1.85	75% - 125%	< 20%	1950	75% - 125%	< 20%
4	IL-27p28/IL-30	5.91	75% - 125%	< 20%	6500	75% - 125%	< 20%
5	IL-15	43.2	75% - 125%	< 20%	26000	75% - 125%	< 20%
6	IL-17A/F	1.39	75% - 125%	< 20%	1620	75% - 125%	< 20%
7	MIP-1 α	0.378	75% - 125%	< 20%	390	75% - 125%	< 20%
8	IP-10	2.15	75% - 125%	< 20%	650	75% - 125%	< 20%
9	MIP-2	0.577	75% - 125%	< 20%	423	75% - 125%	< 20%

Acceptance Data/ Non Specific Binding Specifications:

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

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Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	IL-9	Calibrator	3730	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	MCP-1	Calibrator	426	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	IL-33	Calibrator	3050	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	IL-27p28/IL-30	Calibrator	7940	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	IL-15	Calibrator	36000	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	IL-17A/F	Calibrator	2370	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	MIP-1 α	Calibrator	601	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	IP-10	Calibrator	896	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	MIP-2	Calibrator	596	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:

IL-9 - Spot 1			MCP-1 - Spot 2			IL-33 - Spot 3		
Conc. pg/mL	ECL Signal	%CV	Conc. pg/mL	ECL Signal	%CV	Conc. pg/mL	ECL Signal	%CV
3730	424,000	3.1	426	851,000	5.3	3050	1,010,000	4.5
933	114,000	3.4	107	116,000	3.8	763	316,000	2.5
233	23,300	3.5	26.6	16,100	3.9	191	82,800	2.2
58.3	5,720	3.5	6.66	3,080	3.7	47.7	20,700	2.0
14.6	1,860	7.1	1.66	1,100	6.3	11.9	6,010	9.7
3.64	875	7.2	0.416	572	5.0	2.98	1,880	5.9
0.911	651	8.3	0.104	451	6.1	0.745	911	4.3
0.00	578	11.0	0.00	396	5.1	0.00	585	4.5

IL-27p28/IL-30 - Spot 4			IL-15 - Spot 5			IL-17A/F - Spot 6		
Conc. pg/mL	ECL Signal	%CV	Conc. pg/mL	ECL Signal	%CV	Conc. pg/mL	ECL Signal	%CV
7940	710,000	1.8	36000	331,000	2.4	2370	1,130,000	3.1
1990	246,000	2.6	9000	140,000	4.4	593	315,000	2.7
496	64,200	2.2	2250	39,400	2.9	148	77,700	2.2
124	16,400	3.3	563	9,220	4.9	37.0	19,300	3.4
31.0	4,200	3.4	141	2,740	7.2	9.26	5,320	3.2
7.75	1,340	3.1	35.2	1,130	4.5	2.31	1,550	6.2
1.94	571	5.4	8.79	741	3.0	0.579	589	4.3
0.00	334	5.2	0.00	610	5.0	0.00	259	8.3

MIP-1 α - Spot 7			IP-10 - Spot 8			MIP-2 - Spot 9		
Conc. pg/mL	ECL Signal	%CV	Conc. pg/mL	ECL Signal	%CV	Conc. pg/mL	ECL Signal	%CV
601	1,270,000	2.3	896	968,000	2.7	596	1,090,000	2.0
150	306,000	3.2	224	313,000	3.2	149	301,000	2.5
37.6	70,800	3.2	56.0	81,200	2.6	37.3	76,300	2.1
9.39	17,500	4.8	14.0	20,400	4.3	9.31	19,000	3.1
2.35	4,710	3.4	3.50	5,360	3.4	2.33	5,060	3.3
0.587	1,390	5.3	0.875	1,600	5.3	0.582	1,500	7.3
0.147	566	13.0	0.219	629	8.5	0.146	565	7.1
0.00	267	11.0	0.00	340	12.0	0.00	282	7.1

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Components:

Description	Lot Number	Storage Temperature	Expiration Date
Cytokine Panel 1(mouse) Plate	Z0046957	2-8°C	31 May 2021
Anti-ms IL-9 Antibody	D0081213	2-8°C	31 May 2022
Anti-ms MCP-1 Antibody	D0081214	2-8°C	31 Jul 2022
Anti-ms IL-33 Antibody	D0081215	2-8°C	31 Jul 2022
Anti-ms IL-27p28/IL-30 Antibody	D0081216	2-8°C	31 Jul 2022
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	D0081217	2-8°C	31 Jul 2022
Anti-ms IP-10 Antibody	D0081218	2-8°C	31 Jul 2022
Anti-ms MIP-2 Antibody	D0081219	2-8°C	31 May 2022
Cytokine Panel 1(mouse) Calibrator Blend	A0080156	2-8°C	31 Mar 2023
Diluent 41	M0410026	$\leq -10^{\circ}\text{C}$	30 Jun 2021
Diluent 45	M0450025	$\leq -10^{\circ}\text{C}$	31 May 2021
MSD Read Buffer T	Not Kit Specific	Not Kit Specific	N/A

Additional Components Included in V-PLEX Plus	
Wash Buffer (20X), 100mL	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		11 APR 2019