

CERTIFICATE OF ANALYSIS

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Product Description: V-PLEX® and V-PLEX Plus TH17 Panel 1 (mouse) Kit
Kit Catalog Numbers: K15246-Series
Kit Lot Number: K0081026
Expiration Date: 31 Oct 2019

Acceptance Data/ Percent Recovery Specifications:

Spot	Name	Calibrator		TH17 Panel 1 (mouse) Control 1		TH17 Panel 1 (mouse) Control 2		TH17 Panel 1 (mouse) Control 3	
		Recovery	CV	Recovery	CV	Recovery	CV	Recovery	CV
1	ms MIP-3α	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
2	ms IL-22	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
3	ms IL-23	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
4	ms IL-17C	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
5	ms IL-31	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
6	ms IL-21	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
7	ms IL-17F	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
8	ms IL-16	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
9	ms IL-17A	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
10	ms IL-17E/IL-25	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%

Spot	Name	LLOQ			ULOQ		
		Value	Recovery	CV	Value	Recovery	CV
1	ms MIP-3α	3.42	75% - 125%	< 20%	530	75% - 125%	< 20%
2	ms IL-22	1.58	75% - 125%	< 20%	380	75% - 125%	< 20%
3	ms IL-23	4.19	75% - 125%	< 25%	7600	75% - 125%	< 20%
4	ms IL-17C	0.971	75% - 125%	< 20%	1200	75% - 125%	< 20%
5	ms IL-31	22.6	75% - 125%	< 20%	21000	75% - 125%	< 20%
6	ms IL-21	12.1	75% - 125%	< 25%	9300	75% - 125%	< 20%
7	ms IL-17F	320	75% - 125%	< 20%	52000	75% - 125%	< 20%
8	ms IL-16	15.0	75% - 125%	< 25%	1800	75% - 125%	< 20%
9	ms IL-17A	0.255	75% - 125%	< 20%	360	75% - 125%	< 20%
10	ms IL-17E/IL-25	4.54	75% - 125%	< 20%	3300	75% - 125%	< 20%

Acceptance Data/ Non Specific Binding Specifications:

Spot	Name	ms MIP-3α	ms IL-22	ms IL-23	ms IL-17C	ms IL-31
1	ms MIP-3α	NA	< 1.0%	< 1.0%	< 1.0%	< 1.0%
2	ms IL-22	< 1.0%	NA	< 1.0%	< 1.0%	< 1.0%
3	ms IL-23	< 1.0%	< 1.0%	NA	< 1.0%	< 1.0%
4	ms IL-17C	< 1.0%	< 1.0%	< 1.0%	NA	< 1.0%
5	ms IL-31	< 1.0%	< 1.0%	< 1.0%	< 1.0%	NA
6	ms IL-21	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
7	ms IL-17F	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
8	ms IL-16	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
9	ms IL-17A	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
10	ms IL-17E/IL-25	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%

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Spot	Name	ms IL-21	ms IL-17F	ms IL-16	ms IL-17A	ms IL-17E/IL-25
1	ms MIP-3 α	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
2	ms IL-22	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
3	ms IL-23	< 1.0%	< 2.0%	< 1.0%	< 1.0%	< 1.0%
4	ms IL-17C	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
5	ms IL-31	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
6	ms IL-21	NA	< 1.0%	< 1.0%	< 1.0%	< 1.0%
7	ms IL-17F	< 1.0%	NA	< 1.0%	< 1.0%	< 1.0%
8	ms IL-16	< 1.0%	< 1.0%	NA	< 1.0%	< 1.0%
9	ms IL-17A	< 1.0%	< 1.0%	< 1.0%	NA	< 1.0%
10	ms IL-17E/IL-25	< 1.0%	< 1.0%	< 1.0%	< 1.0%	NA

Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	ms MIP-3 α	Calibrator	1060	pg/mL
		TH17 Panel 1 (mouse) Control 1	823	pg/mL
		TH17 Panel 1 (mouse) Control 2	200	pg/mL
		TH17 Panel 1 (mouse) Control 3	54.6	pg/mL
2	ms IL-22	Calibrator	555	pg/mL
		TH17 Panel 1 (mouse) Control 1	445	pg/mL
		TH17 Panel 1 (mouse) Control 2	133	pg/mL
		TH17 Panel 1 (mouse) Control 3	23.2	pg/mL
3	ms IL-23	Calibrator	8690	pg/mL
		TH17 Panel 1 (mouse) Control 1	6920	pg/mL
		TH17 Panel 1 (mouse) Control 2	1330	pg/mL
		TH17 Panel 1 (mouse) Control 3	199	pg/mL
4	ms IL-17C	Calibrator	1500	pg/mL
		TH17 Panel 1 (mouse) Control 1	1290	pg/mL
		TH17 Panel 1 (mouse) Control 2	203	pg/mL
		TH17 Panel 1 (mouse) Control 3	35.8	pg/mL
5	ms IL-31	Calibrator	30700	pg/mL
		TH17 Panel 1 (mouse) Control 1	24100	pg/mL
		TH17 Panel 1 (mouse) Control 2	4990	pg/mL
		TH17 Panel 1 (mouse) Control 3	1140	pg/mL
6	ms IL-21	Calibrator	16100	pg/mL
		TH17 Panel 1 (mouse) Control 1	11800	pg/mL
		TH17 Panel 1 (mouse) Control 2	2100	pg/mL
		TH17 Panel 1 (mouse) Control 3	355	pg/mL
7	ms IL-17F	Calibrator	87800	pg/mL
		TH17 Panel 1 (mouse) Control 1	59000	pg/mL
		TH17 Panel 1 (mouse) Control 2	10500	pg/mL
		TH17 Panel 1 (mouse) Control 3	2360	pg/mL
8	ms IL-16	Calibrator	2030	pg/mL
		TH17 Panel 1 (mouse) Control 1	1760	pg/mL
		TH17 Panel 1 (mouse) Control 2	1010	pg/mL
		TH17 Panel 1 (mouse) Control 3	548	pg/mL

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9	ms IL-17A	Calibrator	585	pg/mL
		TH17 Panel 1 (mouse) Control 1	494	pg/mL
		TH17 Panel 1 (mouse) Control 2	85.2	pg/mL
		TH17 Panel 1 (mouse) Control 3	14.8	pg/mL
10	ms IL-17E/IL-25	Calibrator	5780	pg/mL
		TH17 Panel 1 (mouse) Control 1	3860	pg/mL
		TH17 Panel 1 (mouse) Control 2	1060	pg/mL
		TH17 Panel 1 (mouse) Control 3	283	pg/mL

Controls tested may not be the same lot as shipped.

Standard Curve Data:

ms MIP-3 α - Spot 1		
Conc. pg/mL	ECL Signal	%CV
1060	456,000	3.9
265	82,300	4.0
66.3	17,700	4.1
16.6	4,290	3.1
4.14	1,260	4.3
1.04	553	5.7
0.259	353	7.0
0.00	305	6.8

ms IL-22 - Spot 2		
Conc. pg/mL	ECL Signal	%CV
555	1,170,000	1.6
139	238,000	2.0
34.7	51,200	2.5
8.67	11,400	2.8
2.17	3,020	3.1
0.542	933	2.8
0.135	419	5.5
0.00	242	7.4

ms IL-23 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
8690	801,000	3.8
2170	263,000	2.2
543	76,500	3.0
136	19,900	3.2
33.9	5,300	3.1
8.49	1,480	2.4
2.12	545	5.1
0.00	229	11.0

ms IL-17C - Spot 4		
Conc. pg/mL	ECL Signal	%CV
1500	561,000	2.7
375	136,000	2.6
93.8	34,000	4.0
23.4	8,760	4.1
5.86	2,430	3.8
1.46	896	4.9
0.366	472	6.9
0.00	374	8.3

ms IL-31 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
30700	715,000	3.1
7680	239,000	2.8
1920	51,100	2.9
480	10,300	3.7
120	2,870	2.8
30.0	1,010	3.1
7.50	574	3.8
0.00	435	4.8

ms IL-21 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
16100	317,000	5.1
4030	105,000	5.2
1010	28,600	7.0
252	7,350	6.3
62.9	2,080	4.6
15.7	783	4.7
3.93	435	4.9
0.00	318	7.0

ms IL-17F - Spot 7		
Conc. pg/mL	ECL Signal	%CV
87800	346,000	4.0
22000	92,800	3.3
5490	23,700	5.1
1370	6,200	3.6
343	2,060	6.1
85.7	977	4.2
21.4	704	8.4
0.00	568	8.8

ms IL-16 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
2030	555,000	4.5
508	101,000	4.7
127	18,000	4.3
31.7	3,580	5.9
7.93	1,310	6.8
1.98	772	8.3
0.496	639	8.9
0.00	632	9.2

ms IL-17A - Spot 9		
Conc. pg/mL	ECL Signal	%CV
585	945,000	3.3
146	265,000	2.1
36.6	72,600	2.6
9.14	18,100	3.6
2.29	4,730	3.3
0.571	1,350	2.6
0.143	492	3.9
0.00	218	8.9

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ms IL-17E/IL-25 - Spot 10		
Conc. pg/mL	ECL Signal	%CV
5780	1,440,000	4.0
1450	316,000	5.1
361	77,300	5.3
90.3	18,600	4.9
22.6	4,960	4.7
5.64	1,530	4.4
1.41	658	7.5
0.00	366	11.0

Components:

Description	Lot Number	Storage Temperature	Expiration Date
TH17 Panel 1 (mouse) Plate	Z0046616	2-8°C	30 Apr 2020
Anti-ms MIP-3α Antibody	D0080949	2-8°C	31 Oct 2019
Anti-ms IL-22 Antibody	D0081049	2-8°C	31 Oct 2021
Anti-ms IL-23 Antibody	D0080951	2-8°C	30 Nov 2019
Anti-ms IL-17C Antibody	D0080952	2-8°C	30 Nov 2019
Anti-ms IL-31 Antibody	D0080953	2-8°C	30 Nov 2019
Anti-ms IL-21 Antibody	D0080954	2-8°C	31 Oct 2019
Anti-ms IL-17F Antibody	D0080955	2-8°C	31 Oct 2019
Ant-ms IL-16 Antibody	D0080956	2-8°C	31 Oct 2019
Anti-ms IL-17A Antibody	D0080957	2-8°C	30 Nov 2019
Anti-ms IL-17E/IL-25 Antibody	D0081051	2-8°C	30 Jun 2020
TH17 Panel 1 (mouse) Calibrator Blend	A0080154	2-8°C	31 Oct 2022
Diluent 41	M0410020	≤ -10°C	29 Feb 2020
Diluent 45	M0450019	≤ -10°C	31 Dec 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), 1000mL	Not Kit Specific
TH17 Panel 1 (mouse) Control 1	Not Kit Specific
TH17 Panel 1 (mouse) Control 2	Not Kit Specific
TH17 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	<i>Dawn Stollar</i>	02 AUG 2018