

CERTIFICATE OF ANALYSIS

Page 1 of 5

Product Description: V-PLEX® and V-PLEX Plus TH17 Panel 1 (mouse) Kit

Kit Catalog Numbers: K15246-Series

Kit Lot Number: K0081151

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-3 α	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-3 α	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-3 α	ms IL-22	ms IL-23	ms IL-17C	ms IL-31
1	ms MIP-3 α	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%

CERTIFICATE OF ANALYSIS

Page 2 of 5

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	1130	pg/mL
		TH17 Panel 1 (mouse) Control 1	797	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	510	pg/mL
		TH17 Panel 1 (mouse) Control 1	423	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	8380	pg/mL
		TH17 Panel 1 (mouse) Control 1	6450	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	1770	pg/mL
		TH17 Panel 1 (mouse) Control 1	1300	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	28500	pg/mL
		TH17 Panel 1 (mouse) Control 1	24500	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	12000	pg/mL
		TH17 Panel 1 (mouse) Control 1	11200	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	85000	pg/mL
		TH17 Panel 1 (mouse) Control 1	51900	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	2420	pg/mL
		TH17 Panel 1 (mouse) Control 1	1810	pg/mL
		TH17 Panel 1 (mouse) Control 2	1010	pg/mL

CERTIFICATE OF ANALYSIS

		TH17 Panel 1 (mouse) Control 3	548	pg/mL
9	ms IL-17A	Calibrator	550	pg/mL
		TH17 Panel 1 (mouse) Control 1	508	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	4540	pg/mL
		TH17 Panel 1 (mouse) Control 1	4230	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
1130	744,000	3.9
283	140,000	3.8
70.6	26,800	3.6
17.7	6,370	3.5
4.41	1,890	3.4
1.10	794	3.8
0.276	504	5.3
0.00	420	12.0

ms IL-22 - Spot 2		
Conc. pg/mL	ECL Signal	%CV
510	1,050,000	2.9
128	211,000	3.2
31.9	42,200	3.8
7.97	10,000	2.3
1.99	3,120	4.3
0.498	1,330	3.0
0.125	875	3.4
0.00	764	6.2

ms IL-23 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
8380	609,000	4.6
2100	197,000	3.4
524	53,900	4.4
131	13,600	5.4
32.7	3,660	6.8
8.18	1,110	4.4
2.05	480	4.6
0.00	343	34.0

ms IL-17C - Spot 4		
Conc. pg/mL	ECL Signal	%CV
1770	880,000	3.1
443	216,000	2.6
111	53,200	3.3
27.7	13,500	2.5
6.91	3,710	2.8
1.73	1,310	3.6
0.432	671	4.2
0.00	449	7.0

ms IL-31 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
28500	582,000	3.5
7130	176,000	3.5
1780	35,700	4.8
445	7,570	5.2
111	2,400	2.6
27.8	976	2.8
6.96	627	2.2
0.00	522	6.2

ms IL-21 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
12000	422,000	4.9
3000	185,000	6.2
750	57,900	4.8
188	15,100	4.7
46.9	4,190	4.2
11.7	1,310	5.4
2.93	582	3.8
0.00	374	12.0

CERTIFICATE OF ANALYSIS

ms IL-17F - Spot 7		
Conc. pg/mL	ECL Signal	%CV
85000	278,000	6.2
21300	80,000	6.3
5310	19,900	6.8
1330	5,210	5.5
332	1,870	4.8
83.0	985	5.1
20.8	745	6.4
0.00	701	9.3

ms IL-16 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
2420	811,000	3.4
605	163,000	2.6
151	28,600	4.5
37.8	5,920	5.3
9.45	2,320	5.2
2.36	1,480	5.4
0.591	1,270	13.0
0.00	1,210	12.0

ms IL-17A - Spot 9		
Conc. pg/mL	ECL Signal	%CV
550	987,000	1.2
138	279,000	2.9
34.4	73,300	2.8
8.59	18,500	1.5
2.15	5,020	2.2
0.537	1,550	3.1
0.134	702	4.0
0.00	554	26.0

ms IL-17E/IL-25 - Spot 10		
Conc. pg/mL	ECL Signal	%CV
4540	1,860,000	2.3
1140	430,000	3.2
284	99,600	4.6
70.9	24,700	3.3
17.7	6,760	3.4
4.43	2,230	5.2
1.11	1,090	5.4
0.00	1,000	25.0

Components:

Description	Lot Number	Storage Temperature	Expiration Date
TH17 Panel 1 (mouse) Plate	Z0046528	2-8°C	30 Nov 2019
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	D0080958	2-8°C	31 Oct 2019
TH17 Panel 1 (mouse) Calibrator Blend	A0080146	2-8°C	31 Aug 2022
Diluent 41	M0410025	≤ -10°C	31 Jan 2021
Diluent 45	M0450023	≤ -10°C	31 Jan 2021
MSD Read Buffer T	Not Kit Specific	Not Kit Specific	N/A

CERTIFICATE OF ANALYSIS

Page 5 of 5

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>	31 JAN 2019