

CERTIFICATE OF ANALYSIS

Page 1 of 4

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

Kit Catalog Numbers: K15246-Series, K152WU-Series

Kit Lot Number: K0080875

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%

CERTIFICATE OF ANALYSIS

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

Spot	Name	Item	Conc	Units
1	ms MIP-3 α	Calibrator	1060	pg/mL
		TH17 Panel 1 (mouse) Control 1	797	pg/mL
		TH17 Panel 1 (mouse) Control 2	188	pg/mL
		TH17 Panel 1 (mouse) Control 3	55.3	pg/mL
2	ms IL-22	Calibrator	555	pg/mL
		TH17 Panel 1 (mouse) Control 1	423	pg/mL
		TH17 Panel 1 (mouse) Control 2	134	pg/mL
		TH17 Panel 1 (mouse) Control 3	41.7	pg/mL
3	ms IL-23	Calibrator	8690	pg/mL
		TH17 Panel 1 (mouse) Control 1	6450	pg/mL
		TH17 Panel 1 (mouse) Control 2	1270	pg/mL
		TH17 Panel 1 (mouse) Control 3	272	pg/mL
4	ms IL-17C	Calibrator	1500	pg/mL
		TH17 Panel 1 (mouse) Control 1	1300	pg/mL
		TH17 Panel 1 (mouse) Control 2	226	pg/mL
		TH17 Panel 1 (mouse) Control 3	41.6	pg/mL
5	ms IL-31	Calibrator	30700	pg/mL
		TH17 Panel 1 (mouse) Control 1	24500	pg/mL
		TH17 Panel 1 (mouse) Control 2	4740	pg/mL
		TH17 Panel 1 (mouse) Control 3	1010	pg/mL
6	ms IL-21	Calibrator	16100	pg/mL
		TH17 Panel 1 (mouse) Control 1	11200	pg/mL
		TH17 Panel 1 (mouse) Control 2	1970	pg/mL
		TH17 Panel 1 (mouse) Control 3	400	pg/mL
7	ms IL-17F	Calibrator	87800	pg/mL
		TH17 Panel 1 (mouse) Control 1	51900	pg/mL
		TH17 Panel 1 (mouse) Control 2	10800	pg/mL
		TH17 Panel 1 (mouse) Control 3	2370	pg/mL
8	ms IL-16	Calibrator	2030	pg/mL
		TH17 Panel 1 (mouse) Control 1	1810	pg/mL
		TH17 Panel 1 (mouse) Control 2	988	pg/mL
		TH17 Panel 1 (mouse) Control 3	533	pg/mL

CERTIFICATE OF ANALYSIS

Page 3 of 4

9	ms IL-17A	Calibrator	585	pg/mL
		TH17 Panel 1 (mouse) Control 1	508	pg/mL
		TH17 Panel 1 (mouse) Control 2	101	pg/mL
		TH17 Panel 1 (mouse) Control 3	14.6	pg/mL
10	ms IL-17E/IL-25	Calibrator	5780	pg/mL
		TH17 Panel 1 (mouse) Control 1	4230	pg/mL
		TH17 Panel 1 (mouse) Control 2	1240	pg/mL
		TH17 Panel 1 (mouse) Control 3	280	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	654,000	2.8
265	123,000	3.1
66.3	24,300	3.1
16.6	6,140	4.0
4.14	1,880	5.0
1.04	797	6.2
0.259	486	6.8
0.00	441	7.5

ms IL-22 - Spot 2		
Conc. pg/mL	ECL Signal	%CV
555	1,200,000	1.8
139	266,000	2.7
34.7	53,800	2.9
8.67	12,800	2.2
2.17	3,600	2.1
0.542	1,180	3.4
0.135	570	3.9
0.00	384	10.0

ms IL-23 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
8690	683,000	3.0
2170	231,000	1.6
543	61,600	2.5
136	16,500	1.6
33.9	4,480	2.3
8.49	1,340	2.6
2.12	603	3.9
0.00	334	6.6

ms IL-17C - Spot 4		
Conc. pg/mL	ECL Signal	%CV
1500	586,000	2.5
375	148,000	2.1
93.8	34,200	3.6
23.4	8,910	3.3
5.86	2,580	3.1
1.46	993	5.8
0.366	547	5.1
0.00	431	7.1

ms IL-31 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
30700	698,000	4.1
7680	237,000	3.1
1920	48,100	3.5
480	10,200	2.8
120	3,060	2.2
30.0	1,180	2.5
7.50	716	2.9
0.00	569	3.4

ms IL-21 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
16100	354,000	4.5
4030	125,000	5.4
1010	33,000	5.3
252	8,930	4.2
62.9	2,630	3.8
15.7	1,010	4.9
3.93	602	3.5
0.00	463	4.8

ms IL-17F - Spot 7		
Conc. pg/mL	ECL Signal	%CV
87800	302,000	4.0
22000	83,600	3.5
5490	19,300	3.5
1370	5,300	6.5
343	1,850	2.4
85.7	982	3.0
21.4	753	4.6
0.00	675	7.8

ms IL-16 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
2030	578,000	5.3
508	105,000	5.9
127	17,300	4.8
31.7	3,720	4.9
7.93	1,480	4.5
1.98	1,000	8.8
0.496	871	7.1
0.00	879	12.0

ms IL-17A - Spot 9		
Conc. pg/mL	ECL Signal	%CV
585	887,000	3.1
146	257,000	1.4
36.6	65,000	1.7
9.14	16,700	2.6
2.29	4,590	2.5
0.571	1,380	3.3
0.143	584	3.0
0.00	308	6.9

CERTIFICATE OF ANALYSIS

Page 4 of 4

ms IL-17E/IL-25 - Spot 10		
Conc. pg/mL	ECL Signal	%CV
5780	1,060,000	4.4
1450	225,000	3.8
361	47,300	4.5
90.3	11,800	7.0
22.6	3,360	4.2
5.64	1,120	5.2
1.41	536	5.0
0.00	336	8.4

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	D0080950	2-8°C	31 Oct 2019
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
Anti-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	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), 100mL	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 JAN 2018