

**CERTIFICATE OF ANALYSIS**

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

**Kit Catalog Numbers:** K15085-Series; K151XD-Series; K151XA-Series

**Kit Lot Number:** K0081469

**Expiration Date:** 28 Feb 2022

**Acceptance Data/ Percent Recovery Specifications:**

Spot	Name	Calibrator		TH17 Panel 1 (human) Control 1		TH17 Panel 1 (human) Control 2		TH17 Panel 1 (human) Control 3	
		Recovery	CV	Recovery	CV	Recovery	CV	Recovery	CV
1	IL-17A	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
4	IL-21	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
5	IL-31	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
6	IL-27	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
7	IL-23	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
8	IL-22	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
10	MIP-3 $\alpha$	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%

Spot	Name	LLOQ			ULOQ		
		Value	Recovery	CV	Value	Recovery	CV
1	IL-17A	5.86	80% - 120%	< 20%	1950	80% - 120%	< 20%
4	IL-21	6.12	75% - 125%	< 25%	650	75% - 125%	< 25%
5	IL-31	4.22	80% - 120%	< 20%	650	80% - 120%	< 20%
6	IL-27	38.7	80% - 120%	< 20%	13000	80% - 120%	< 20%
7	IL-23	4.60	80% - 120%	< 20%	3250	80% - 120%	< 20%
8	IL-22	2.78	80% - 120%	< 20%	325	80% - 120%	< 20%
10	MIP-3 $\alpha$	0.750	80% - 120%	< 20%	325	80% - 120%	< 20%

**Acceptance Data/ Non Specific Binding Specifications:**

Spot	Name	NSB Spec
1	IL-17A	< 1.0%
4	IL-21	< 1.0%
5	IL-31	< 1.0%
6	IL-27	< 1.0%
7	IL-23	< 1.0%
8	IL-22	< 1.0%
10	MIP-3 $\alpha$	< 1.0%

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**Stock Concentration of Material Tested :**

Spot	Name	Item	Conc	Units
1	IL-17A	Calibrator	3140	pg/mL
		TH17 Panel 1 (human) Control 1	1980	pg/mL
		TH17 Panel 1 (human) Control 2	293	pg/mL
		TH17 Panel 1 (human) Control 3	42.5	pg/mL
4	IL-21	Calibrator	1180	pg/mL
		TH17 Panel 1 (human) Control 1	872	pg/mL
		TH17 Panel 1 (human) Control 2	161	pg/mL
		TH17 Panel 1 (human) Control 3	26.8	pg/mL
5	IL-31	Calibrator	964	pg/mL
		TH17 Panel 1 (human) Control 1	1080	pg/mL
		TH17 Panel 1 (human) Control 2	176	pg/mL
		TH17 Panel 1 (human) Control 3	23.9	pg/mL
6	IL-27	Calibrator	18200	pg/mL
		TH17 Panel 1 (human) Control 1	31000	pg/mL
		TH17 Panel 1 (human) Control 2	6560	pg/mL
		TH17 Panel 1 (human) Control 3	1380	pg/mL
7	IL-23	Calibrator	5540	pg/mL
		TH17 Panel 1 (human) Control 1	5360	pg/mL
		TH17 Panel 1 (human) Control 2	602	pg/mL
		TH17 Panel 1 (human) Control 3	69.8	pg/mL
8	IL-22	Calibrator	542	pg/mL
		TH17 Panel 1 (human) Control 1	526	pg/mL
		TH17 Panel 1 (human) Control 2	83.3	pg/mL
		TH17 Panel 1 (human) Control 3	15.4	pg/mL
10	MIP-3 $\alpha$	Calibrator	508	pg/mL
		TH17 Panel 1 (human) Control 1	428	pg/mL
		TH17 Panel 1 (human) Control 2	175	pg/mL
		TH17 Panel 1 (human) Control 3	64.6	pg/mL

Controls tested may not be the same lot as shipped.

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### Standard Curve Data:

IL-17A - Spot 1		
Conc. pg/mL	ECL Signal	%CV
3140	589,000	2.1
785	144,000	2.8
196	35,800	2.2
49.1	9,340	3.8
12.3	2,890	3.4
3.07	1,270	4.3
0.767	853	8.3
0.00	690	11.0

IL-21 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
1180	198,000	5.6
295	42,900	5.3
73.8	10,700	4.5
18.4	3,220	5.0
4.61	1,440	4.3
1.15	997	4.4
0.288	852	6.7
0.00	853	8.5

IL-31 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
964	513,000	2.4
241	156,000	2.1
60.3	43,100	2.1
15.1	11,200	3.4
3.77	2,990	2.6
0.941	911	3.2
0.235	387	8.4
0.00	206	14.0

IL-27 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
18200	184,000	2.6
4550	50,500	2.8
1140	13,400	2.9
284	3,860	2.7
71.1	1,610	2.8
17.8	1,000	3.0
4.44	836	4.0
0.00	776	4.5

IL-23 - Spot 7		
Conc. pg/mL	ECL Signal	%CV
5540	419,000	4.6
1390	113,000	5.9
346	30,100	5.2
86.6	7,730	5.3
21.6	2,230	6.4
5.41	814	4.5
1.35	442	9.0
0.00	320	9.5

IL-22 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
542	429,000	3.4
136	121,000	3.0
33.9	32,000	4.1
8.47	8,450	4.0
2.12	2,600	4.8
0.529	1,160	5.5
0.132	740	9.1
0.00	575	10.0

MIP-3 $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
508	288,000	3.9
127	65,300	3.8
31.8	15,600	5.6
7.94	4,000	5.3
1.98	1,420	4.1
0.496	710	5.6
0.124	538	4.7
0.00	467	9.5

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### Components:

Description	Lot Number	Storage Temperature	Expiration Date
TH17 Panel 1 (human) Plate	Z0047308	2-8°C	30 Sep 2022
Anti-hu IL-17A Antibody	D0081135	2-8°C	30 Apr 2022
Anti-hu IL-21 Antibody	D0081427	2-8°C	31 Jul 2023
Anti-hu IL-31 Antibody	D0081140	2-8°C	28 Feb 2022
Anti-hu IL-27 Antibody	D0081429	2-8°C	31 Jul 2023
Anti-hu IL-23 Antibody	D0081138	2-8°C	31 Mar 2022
Anti-hu IL-22 Antibody	D0081137	2-8°C	28 Feb 2022
Anti-hu MIP-3 $\alpha$ Antibody	D0081428	2-8°C	31 Jul 2023
TH17 Panel 1 (human) Calibrator Blend	A0080241	2-8°C	28 Feb 2025
Diluent 43	M0430037	$\leq -10^{\circ}\text{C}$	31 Aug 2022
Diluent 3	M0030097	$\leq -10^{\circ}\text{C}$	31 Aug 2022
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 (human) Control 1	Not Kit Specific
TH17 Panel 1 (human) Control 2	Not Kit Specific
TH17 Panel 1 (human) 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
<b>Review/Approval</b>	Karen Hamilla	Quality		24 JUN 2020