

CERTIFICATE OF ANALYSIS

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Product Description: V-PLEX® and V-PLEX Plus Cytokine Panel 2 (human) Kit
Kit Catalog Numbers: K15084-Series, K151WO-Series, K151WP-Series, K151WQ-Series, K151WZ-Series, K151XC-Series
Kit Lot Number: K0081523
Expiration Date: 31 May 2022

Acceptance Data/ Percent Recovery Specifications:

Spot	Name	Calibrator		Cytokine Panel 2 (human) Control 1		Cytokine Panel 2 (human) Control 2		Cytokine Panel 2 (human) Control 3	
		Recovery	CV	Recovery	CV	Recovery	CV	Recovery	CV
1	IL-17A/F	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
2	IL-17B	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
3	IL-17C	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
4	IL-17D	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
6	IL-1RA	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
7	IL-3	75% - 125%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
8	IL-9	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
10	TSLP	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%

Spot	Name	LLOQ			ULOQ		
		Value	Recovery	CV	Value	Recovery	CV
1	IL-17A/F	7.57	80% - 120%	< 20%	3900	80% - 120%	< 20%
2	IL-17B	2.45	75% - 125%	< 20%	1040	75% - 125%	< 20%
3	IL-17C	3.84	75% - 125%	< 20%	1620	75% - 125%	< 20%
4	IL-17D	11.2	75% - 125%	< 20%	5200	75% - 125%	< 20%
6	IL-1RA	9.19	75% - 125%	< 25%	650	80% - 120%	< 20%
7	IL-3	12.6	75% - 125%	< 20%	1950	80% - 120%	< 20%
8	IL-9	2.23	80% - 120%	< 25%	975	80% - 120%	< 20%
10	TSLP	0.460	75% - 125%	< 20%	325	75% - 125%	< 20%

Acceptance Data/ Non Specific Binding Specifications:

Spot	Name	NSB Spec
1	IL-17A/F	< 1.0%
2	IL-17B	< 1.0%
3	IL-17C	< 1.0%
4	IL-17D	< 1.0%
6	IL-1RA	< 1.0%
7	IL-3	< 1.0%
8	IL-9	< 1.0%
10	TSLP	< 1.0%

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Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	IL-17A/F	Calibrator	6590	pg/mL
		Cytokine Panel 2 (human) Control 1	5550	pg/mL
		Cytokine Panel 2 (human) Control 2	636	pg/mL
		Cytokine Panel 2 (human) Control 3	84.2	pg/mL
2	IL-17B	Calibrator	1790	pg/mL
		Cytokine Panel 2 (human) Control 1	1550	pg/mL
		Cytokine Panel 2 (human) Control 2	303	pg/mL
		Cytokine Panel 2 (human) Control 3	133	pg/mL
3	IL-17C	Calibrator	2800	pg/mL
		Cytokine Panel 2 (human) Control 1	2120	pg/mL
		Cytokine Panel 2 (human) Control 2	154	pg/mL
		Cytokine Panel 2 (human) Control 3	78.6	pg/mL
4	IL-17D	Calibrator	9050	pg/mL
		Cytokine Panel 2 (human) Control 1	6410	pg/mL
		Cytokine Panel 2 (human) Control 2	555	pg/mL
		Cytokine Panel 2 (human) Control 3	139	pg/mL
6	IL-1RA	Calibrator	1240	pg/mL
		Cytokine Panel 2 (human) Control 1	514	pg/mL
		Cytokine Panel 2 (human) Control 2	93.1	pg/mL
		Cytokine Panel 2 (human) Control 3	54.4	pg/mL
7	IL-3	Calibrator	3710	pg/mL
		Cytokine Panel 2 (human) Control 1	2900	pg/mL
		Cytokine Panel 2 (human) Control 2	511	pg/mL
		Cytokine Panel 2 (human) Control 3	209	pg/mL
8	IL-9	Calibrator	1620	pg/mL
		Cytokine Panel 2 (human) Control 1	1290	pg/mL
		Cytokine Panel 2 (human) Control 2	288	pg/mL
		Cytokine Panel 2 (human) Control 3	77.4	pg/mL
10	TSLP	Calibrator	499	pg/mL
		Cytokine Panel 2 (human) Control 1	619	pg/mL
		Cytokine Panel 2 (human) Control 2	71.5	pg/mL
		Cytokine Panel 2 (human) Control 3	12.1	pg/mL

Controls tested may not be the same lot as shipped.

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Standard Curve Data:

IL-17A/F - Spot 1		
Conc. pg/mL	ECL Signal	%CV
6590	1,080,000	2.1
1650	278,000	2.2
412	67,500	2.2
103	17,200	2.4
25.7	4,550	3.4
6.44	1,490	3.9
1.61	640	5.9
0.00	367	9.8

IL-17B - Spot 2		
Conc. pg/mL	ECL Signal	%CV
1790	192,000	1.6
448	40,000	1.5
112	9,470	1.7
28.0	2,340	2.9
6.99	721	3.7
1.75	294	5.7
0.437	193	12.0
0.00	155	13.0

IL-17C - Spot 3		
Conc. pg/mL	ECL Signal	%CV
2800	341,000	4.6
700	84,500	3.2
175	21,700	4.2
43.8	5,390	3.4
10.9	1,740	3.6
2.73	702	4.2
0.684	473	4.8
0.00	387	8.8

IL-17D - Spot 4		
Conc. pg/mL	ECL Signal	%CV
9050	260,000	4.5
2260	73,100	4.0
566	18,900	3.3
141	5,150	5.0
35.4	1,500	4.5
8.84	662	4.1
2.21	448	7.2
0.00	357	9.4

IL-1RA - Spot 6		
Conc. pg/mL	ECL Signal	%CV
1240	1,170,000	2.2
310	233,000	2.6
77.5	43,500	3.4
19.4	8,830	8.1
4.84	2,750	11.0
1.21	1,100	7.2
0.303	789	15.0
0.00	678	21.0

IL-3 - Spot 7		
Conc. pg/mL	ECL Signal	%CV
3710	962,000	4.0
928	198,000	3.7
232	29,100	3.9
58.0	4,620	4.8
14.5	1,230	4.2
3.62	511	4.6
0.906	352	5.5
0.00	280	9.9

IL-9 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
1620	1,650,000	5.4
405	462,000	4.1
101	127,000	4.2
25.3	33,200	6.6
6.33	8,180	8.8
1.58	2,310	5.6
0.396	822	6.3
0.00	341	21.0

TSLP - Spot 10		
Conc. pg/mL	ECL Signal	%CV
499	278,000	4.4
125	60,200	2.1
31.2	14,700	2.5
7.80	3,700	5.6
1.95	1,160	3.9
0.487	474	6.6
0.122	308	8.2
0.00	247	12.0

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Components:

Description	Lot Number	Storage Temperature	Expiration Date
Cytokine Panel 2 (human) Plate	Z0047352	2-8°C	31 Dec 2022
Anti-hu IL-17A/F Antibody	D0081475	2-8°C	31 Aug 2023
Anti-hu IL-17B Antibody	D0081476	2-8°C	30 Sep 2023
Anti-hu IL-17C Antibody	D0081477	2-8°C	30 Sep 2023
Anti-hu IL-17D Antibody	D0081533	2-8°C	31 Jan 2024
Anti-hu IL-1RA Antibody	D0081479	2-8°C	31 Aug 2023
Anti-hu IL-3 Antibody	D0081480	2-8°C	31 Aug 2023
Anti-hu IL-9 Antibody	D0081481	2-8°C	31 Aug 2023
Anti-hu TSLP Antibody	D0081532	2-8°C	31 Jan 2024
Cytokine Panel 2 (Human) Calibrator Blend	A0080251	2-8°C	30 Apr 2025
Diluent 43	M0430036	≤ -10°C	31 May 2022
Diluent 3	M0030096	≤ -10°C	30 Jun 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
Cytokine Panel 2 (human) Control 1	Not Kit Specific
Cytokine Panel 2 (human) Control 2	Not Kit Specific
Cytokine Panel 2 (human) Control 3	Not Kit Specific

Additional Comments:

	Assay	Spot	Specification	Comment
1	IL-17B	2	Calibrator Conc.	Measured 19.9% (specification 50-200%)
2	TSLP	10	Calibrator Conc.	Measured 35.9% (specification 50-200%)

Statement:

The above product is intended for Research Use Only. Not for use in Diagnostic Procedures.

	Name	Function	Signature	Date
Review/Approval	Karen Hamilla	Quality		24 AUG 2020