

CERTIFICATE OF ANALYSIS

Page 1 of 4

Product Description: V-PLEX® and V-PLEX Plus Cytokine Panel 2 (human) Kit

Kit Catalog Numbers: K15084-Series

Kit Lot Number: K0080717

Expiration Date: 30 Apr 2019

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	hu IL-17A/F	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
2	hu IL-17B	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
3	hu IL-17C	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
4	hu IL-17D	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%
6	hu IL-1RA	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
7	hu IL-3	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
8	hu IL-9	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%	80% - 120%	< 20%
10	hu TSLP	80% - 120%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%	75% - 125%	< 20%

Spot	Name	LLOQ			ULOQ		
		Value	Recovery	CV	Value	Recovery	CV
1	hu IL-17A/F	7.57	80% - 120%	< 20%	3900	80% - 120%	< 20%
2	hu IL-17B	1.12	75% - 125%	< 20%	1040	75% - 125%	< 20%
3	hu IL-17C	3.84	75% - 125%	< 20%	1620	75% - 125%	< 20%
4	hu IL-17D	11.2	75% - 125%	< 20%	5200	75% - 125%	< 20%
6	hu IL-1RA	9.19	75% - 125%	< 25%	650	80% - 120%	< 20%
7	hu IL-3	12.6	75% - 125%	< 20%	1950	80% - 120%	< 20%
8	hu IL-9	2.23	80% - 120%	< 25%	975	80% - 120%	< 20%
10	hu TSLP	0.460	75% - 125%	< 20%	325	75% - 125%	< 20%

Acceptance Data/ Non Specific Binding Specifications:

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

CERTIFICATE OF ANALYSIS

Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	hu IL-17A/F	Calibrator	6140	pg/mL
		Cytokine Panel 2 (human) Control 1	5913	pg/mL
		Cytokine Panel 2 (human) Control 2	796	pg/mL
		Cytokine Panel 2 (human) Control 3	74	pg/mL
2	hu IL-17B	Calibrator	1400	pg/mL
		Cytokine Panel 2 (human) Control 1	487	pg/mL
		Cytokine Panel 2 (human) Control 2	71	pg/mL
		Cytokine Panel 2 (human) Control 3	133	pg/mL
3	hu IL-17C	Calibrator	2500	pg/mL
		Cytokine Panel 2 (human) Control 1	2360	pg/mL
		Cytokine Panel 2 (human) Control 2	295	pg/mL
		Cytokine Panel 2 (human) Control 3	77	pg/mL
4	hu IL-17D	Calibrator	7240	pg/mL
		Cytokine Panel 2 (human) Control 1	5479	pg/mL
		Cytokine Panel 2 (human) Control 2	559	pg/mL
		Cytokine Panel 2 (human) Control 3	146	pg/mL
6	hu IL-1RA	Calibrator	714	pg/mL
		Cytokine Panel 2 (human) Control 1	670	pg/mL
		Cytokine Panel 2 (human) Control 2	143	pg/mL
		Cytokine Panel 2 (human) Control 3	50	pg/mL
7	hu IL-3	Calibrator	3430	pg/mL
		Cytokine Panel 2 (human) Control 1	3173	pg/mL
		Cytokine Panel 2 (human) Control 2	703	pg/mL
		Cytokine Panel 2 (human) Control 3	240	pg/mL
8	hu IL-9	Calibrator	1440	pg/mL
		Cytokine Panel 2 (human) Control 1	1272	pg/mL
		Cytokine Panel 2 (human) Control 2	345	pg/mL
		Cytokine Panel 2 (human) Control 3	66	pg/mL
10	hu TSLP	Calibrator	515	pg/mL
		Cytokine Panel 2 (human) Control 1	581	pg/mL
		Cytokine Panel 2 (human) Control 2	87	pg/mL
		Cytokine Panel 2 (human) Control 3	12	pg/mL

Controls tested may not be the same lot as shipped.

CERTIFICATE OF ANALYSIS

Standard Curve Data:

hu IL-17A/F - Spot 1		
Conc. pg/mL	ECL Signal	%CV
6140	847,000	1.6
1540	219,000	2.1
384	50,500	2.5
95.9	12,300	1.8
24.0	3,290	1.9
6.00	1,000	2.5
1.50	443	6.6
0.00	248	8.4

hu IL-17B - Spot 2		
Conc. pg/mL	ECL Signal	%CV
1400	684,000	2.5
350	165,000	4.6
87.5	39,900	3.4
21.9	9,850	3.1
5.47	2,510	4.5
1.37	709	3.1
0.342	276	6.7
0.00	121	18.0

hu IL-17C - Spot 3		
Conc. pg/mL	ECL Signal	%CV
2500	344,000	6.8
625	92,400	6.4
156	22,700	8.3
39.1	5,350	8.7
9.77	1,460	11.0
2.44	507	10.0
0.610	289	7.9
0.00	204	9.4

hu IL-17D - Spot 4		
Conc. pg/mL	ECL Signal	%CV
7240	373,000	3.3
1810	107,000	4.7
453	25,900	6.2
113	6,680	3.3
28.3	1,710	2.6
7.07	565	5.2
1.77	268	9.0
0.00	176	11.0

hu IL-1RA - Spot 6		
Conc. pg/mL	ECL Signal	%CV
714	642,000	2.7
179	115,000	3.3
44.6	20,200	5.0
11.2	4,400	4.3
2.79	1,410	8.3
0.697	631	12.0
0.174	515	27.0
0.00	406	12.0

hu IL-3 - Spot 7		
Conc. pg/mL	ECL Signal	%CV
3430	1,420,000	2.7
858	270,000	2.4
214	35,200	2.4
53.6	4,910	2.9
13.4	1,120	3.8
3.35	364	6.7
0.837	219	11.0
0.00	160	12.0

hu IL-9 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
1440	1,430,000	3.9
360	374,000	4.1
90.0	90,600	3.2
22.5	23,400	4.4
5.63	5,830	4.6
1.41	1,640	6.6
0.352	573	9.4
0.00	265	20.0

hu TSLP - Spot 10		
Conc. pg/mL	ECL Signal	%CV
515	672,000	2.3
129	173,000	4.3
32.2	43,100	3.5
8.05	10,600	4.1
2.01	2,760	4.1
0.503	783	5.9
0.126	301	6.0
0.00	141	20.0

CERTIFICATE OF ANALYSIS

Components:

Description	Lot Number	Storage Temperature	Expiration Date
Cytokine Panel 2 (human) Plate	Z0046384	2-8°C	31 Jul 2019
Anti-hu IL-17A/F Antibody	D0080766	2-8°C	30 Apr 2019
Anti-hu IL-17B Antibody	D0080767	2-8°C	30 Apr 2019
Anti-hu IL-17C Antibody	D0080768	2-8°C	30 Apr 2019
Anti-hu IL-17D Antibody	D0080946	2-8°C	31 Aug 2019
Anti-hu IL-1RA Antibody	D0080771	2-8°C	30 Apr 2019
Anti-hu IL-3 Antibody	D0080772	2-8°C	30 Apr 2019
Anti-hu IL-9 Antibody	D0080773	2-8°C	30 Apr 2019
Anti-hu TSLP Antibody	D0080775	2-8°C	30 Apr 2019
Cytokine Panel 2 (human) Calibrator Blend	A0080116	2-8°C	31 Jan 2022
Diluent 43	M0430020	≤ -10°C	30 Jun 2019
Diluent 3	M0030074	≤ -10°C	30 Jun 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
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

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>	27 JUL 2017