

CERTIFICATE OF ANALYSIS

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Product Description: V-PLEX® and V-PLEX Plus Proinflammatory Panel 1 (mouse) Kit
Kit Catalog Numbers: K15048-Series, K152QT-Series, K152QU-Series, K152QS-Series
Kit Lot Number: K0081337
Expiration Date: 31 Dec 2021

Acceptance Data/ Percent Recovery Specifications:

Spot	Name	Calibrator		Proinflammatory Panel 1 (mouse) Control 1		Proinflammatory Panel 1 (mouse) Control 2		Proinflammatory Panel 1 (mouse) Control 3	
		Recovery	CV	Recovery	CV	Recovery	CV	Recovery	CV
1	IFN- γ	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
2	IL-1 β	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
3	IL-2	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
4	IL-4	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
5	IL-5	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
6	IL-6	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
7	KC/GRO	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
8	IL-10	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
9	IL-12p70	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
10	TNF- α	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%

Spot	Name	Value	LLOQ		Value	ULOQ	
			Recovery	CV		Recovery	CV
1	IFN- γ	0.390	75% - 125%	< 25%	570	75% - 125%	< 25%
2	IL-1 β	0.720	75% - 125%	< 25%	1030	75% - 125%	< 25%
3	IL-2	1.03	75% - 125%	< 25%	1570	75% - 125%	< 25%
4	IL-4	0.818	75% - 125%	< 25%	1060	75% - 125%	< 25%
5	IL-5	0.302	75% - 125%	< 25%	590	75% - 125%	< 25%
6	IL-6	7.61	75% - 125%	< 25%	3140	75% - 125%	< 25%
7	KC/GRO	3.29	75% - 125%	< 25%	1230	75% - 125%	< 25%
8	IL-10	7.26	75% - 125%	< 25%	2030	75% - 125%	< 25%
9	IL-12p70	179	75% - 125%	< 25%	20600	75% - 125%	< 25%
10	TNF- α	0.980	75% - 125%	< 25%	403	75% - 125%	< 25%

Acceptance Data/ Non Specific Binding Specifications:

Spot	Name	NSB Spec
1	IFN- γ	< 1.0%
2	IL-1 β	< 1.0%
3	IL-2	< 1.0%
4	IL-4	< 1.0%
5	IL-5	< 1.0%
6	IL-6	< 1.0%
7	KC/GRO	< 1.0%
8	IL-10	< 1.0%
9	IL-12p70	< 1.0%
10	TNF- α	< 1.0%

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Stock Concentration of Material Tested :

Spot	Name	Item	Conc	Units
1	IFN- γ	Calibrator	949	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	467	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	32.2	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	2.15	pg/mL
2	IL-1 β	Calibrator	1480	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	741	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	53.8	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	4.48	pg/mL
3	IL-2	Calibrator	2450	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	919	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	54.8	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	5.84	pg/mL
4	IL-4	Calibrator	1570	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	480	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	62	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	15.9	pg/mL
5	IL-5	Calibrator	892	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	368	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	55.5	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	8.58	pg/mL
6	IL-6	Calibrator	4660	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	1050	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	167	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	31.5	pg/mL
7	KC/GRO	Calibrator	2160	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	695	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	116	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	17.7	pg/mL
8	IL-10	Calibrator	2510	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	1160	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	345	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	136	pg/mL
9	IL-12p70	Calibrator	31900	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	13500	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	3380	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	806	pg/mL
10	TNF- α	Calibrator	577	pg/mL
		Proinflammatory Panel 1 (mouse) Control 1	166	pg/mL
		Proinflammatory Panel 1 (mouse) Control 2	29.9	pg/mL
		Proinflammatory Panel 1 (mouse) Control 3	4.93	pg/mL

Controls tested may not be the same lot as shipped.

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Standard Curve Data:

IFN- γ - Spot 1		
Conc. pg/mL	ECL Signal	%CV
949	1,660,000	3.3
237	506,000	2.2
59.3	143,000	1.6
14.8	37,200	2.0
3.71	9,700	5.2
0.927	2,850	3.2
0.232	1,060	4.2
0.00	243	39.0

IL-1 β - Spot 2		
Conc. pg/mL	ECL Signal	%CV
1480	752,000	3.7
370	217,000	3.2
92.5	63,400	3.5
23.1	16,300	3.6
5.78	4,640	4.6
1.45	1,500	4.2
0.361	707	4.8
0.00	317	24.0

IL-2 - Spot 3		
Conc. pg/mL	ECL Signal	%CV
2450	1,300,000	5.0
613	361,000	3.1
153	98,000	3.7
38.3	23,700	4.6
9.57	6,600	4.7
2.39	1,930	3.5
0.598	797	5.3
0.00	258	38.0

IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
1570	1,140,000	2.9
393	338,000	2.7
98.1	99,200	1.9
24.5	26,600	2.5
6.13	7,170	3.1
1.53	2,280	4.7
0.383	1,020	5.1
0.00	439	18.0

IL-5 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
892	1,520,000	2.4
223	359,000	1.8
55.8	91,400	2.1
13.9	22,900	3.0
3.48	6,160	3.2
0.871	1,880	2.0
0.218	780	4.4
0.00	291	23.0

IL-6 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
4660	514,000	2.7
1170	110,000	1.9
291	27,800	1.9
72.8	6,920	3.8
18.2	2,160	3.2
4.55	821	3.5
1.14	474	3.8
0.00	302	20.0

KC/GRO - Spot 7		
Conc. pg/mL	ECL Signal	%CV
2160	2,020,000	3.5
540	454,000	2.5
135	105,000	3.7
33.8	22,900	3.6
8.44	6,170	4.0
2.11	1,730	4.1
0.527	665	6.1
0.00	182	51.0

IL-10 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
2510	754,000	3.9
628	185,000	4.4
157	49,300	3.8
39.2	13,200	3.7
9.80	4,170	5.8
2.45	1,890	4.3
0.613	1,520	8.3
0.00	1,210	15.0

IL-12p70 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
31900	726,000	1.7
7980	138,000	2.8
1990	25,900	3.4
498	5,010	5.6
125	1,360	4.5
31.2	527	7.4
7.79	342	24.0
0.00	204	34.0

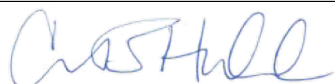
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TNF- α - Spot 10		
Conc. pg/mL	ECL Signal	%CV
577	537,000	2.0
144	140,000	2.0
36.1	39,000	2.4
9.02	10,000	3.3
2.25	3,080	5.9
0.563	1,080	5.9
0.141	642	9.5
0.00	419	28.0

Components:

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (mouse) Plate	Z0047185	2-8°C	31 Mar 2022
Anti-ms IFN- γ Antibody	D0081378	2-8°C	31 Mar 2023
Anti-ms IL-1 β Antibody	D0081384	2-8°C	31 May 2023
Anti-ms IL-2 Antibody	D0081345	2-8°C	28 Feb 2023
Anti-ms IL-4 Antibody	D0081270	2-8°C	31 Oct 2022
Anti-ms IL-5 Antibody	D0081290	2-8°C	31 Dec 2022
Anti-ms IL-6 Antibody	D0081322	2-8°C	31 Dec 2022
Anti-ms KC/GRO Antibody	D0081323	2-8°C	28 Feb 2023
Anti-ms IL-10 Antibody	D0081291	2-8°C	31 Mar 2023
Anti-ms IL-12p70 Antibody	D0081272	2-8°C	31 Oct 2022
Anti-ms TNF- α Antibody	D0081359	2-8°C	30 Apr 2023
Proinflammatory Panel 1 (mouse) Calibrator Blend	A0080197	2-8°C	31 Dec 2023
Diluent 41	M0410029	\leq -10°C	31 Dec 2021
Diluent 45	M0450030	\leq -10°C	28 Feb 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
Proinflammatory Panel 1 (mouse) Control 1	Not Kit Specific
Proinflammatory Panel 1 (mouse) Control 2	Not Kit Specific
Proinflammatory Panel 1 (mouse) Control 3	Not Kit Specific

	Name	Function	Signature	Date
Review/Approval	Carissa Hubbard	Quality		27 DEC 2019