

## CERTIFICATE OF ANALYSIS

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**Product Description:** V-PLEX® and V-PLEX Plus Proinflammatory Panel 2 (rat) Kit  
**Kit Catalog Numbers:** K15059-Series, K153OD-Series, K153QO-Series, K153QR-Series, K153QS-Series, K153QT-Series  
**Kit Lot Number:** K0081328  
**Expiration Date:** 31 May 2021

**Acceptance Data/ Percent Recovery Specifications:**

Spot	Name	Calibrator		Proinflammatory Panel 1 (rat) Control 1		Proinflammatory Panel 1 (rat) Control 2		Proinflammatory Panel 1 (rat) Control 3	
		Recovery	CV	Recovery	CV	Recovery	CV	Recovery	CV
1	IFN- $\gamma$	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
2	IL-1 $\beta$	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-13	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%
10	TNF- $\alpha$	80% - 120%	< 20%	75% - 125%	< 25%	75% - 125%	< 25%	75% - 125%	< 25%

Spot	Name	LLOQ			ULOQ		
		Value	Recovery	CV	Value	Recovery	CV
1	IFN- $\gamma$	39.7	75% - 125%	< 25%	3750	75% - 125%	< 25%
2	IL-1 $\beta$	102	75% - 125%	< 25%	8100	75% - 125%	< 25%
4	IL-4	8.00	75% - 125%	< 25%	723	75% - 125%	< 25%
5	IL-5	82.0	75% - 125%	< 25%	3000	75% - 125%	< 25%
6	IL-6	96.9	75% - 125%	< 25%	8550	75% - 125%	< 25%
7	KC/GRO	21.7	75% - 125%	< 25%	728	75% - 125%	< 25%
8	IL-10	163	75% - 125%	< 25%	15700	75% - 125%	< 25%
9	IL-13	12.5	75% - 125%	< 25%	1080	75% - 125%	< 25%
10	TNF- $\alpha$	9.10	75% - 125%	< 25%	793	75% - 125%	< 25%

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

Spot	Name	NSB Spec
1	IFN- $\gamma$	< 1.0%
2	IL-1 $\beta$	< 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-13	< 1.0%
10	TNF- $\alpha$	< 1.0%

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**Stock Concentration of Material Tested :**

Spot	Name	Item	Conc	Units
1	IFN- $\gamma$	Calibrator	5790	pg/mL
		Proinflammatory Panel 1 (rat) Control 1	5130	pg/mL
		Proinflammatory Panel 1 (rat) Control 2	1550	pg/mL
		Proinflammatory Panel 1 (rat) Control 3	454	pg/mL
2	IL-1 $\beta$	Calibrator	13300	pg/mL
		Proinflammatory Panel 1 (rat) Control 1	12000	pg/mL
		Proinflammatory Panel 1 (rat) Control 2	3180	pg/mL
		Proinflammatory Panel 1 (rat) Control 3	1090	pg/mL
4	IL-4	Calibrator	1100	pg/mL
		Proinflammatory Panel 1 (rat) Control 1	977	pg/mL
		Proinflammatory Panel 1 (rat) Control 2	275	pg/mL
		Proinflammatory Panel 1 (rat) Control 3	84.9	pg/mL
5	IL-5	Calibrator	9230	pg/mL
		Proinflammatory Panel 1 (rat) Control 1	3640	pg/mL
		Proinflammatory Panel 1 (rat) Control 2	1820	pg/mL
		Proinflammatory Panel 1 (rat) Control 3	927	pg/mL
6	IL-6	Calibrator	13200	pg/mL
		Proinflammatory Panel 1 (rat) Control 1	10600	pg/mL
		Proinflammatory Panel 1 (rat) Control 2	3480	pg/mL
		Proinflammatory Panel 1 (rat) Control 3	1130	pg/mL
7	KC/GRO	Calibrator	2770	pg/mL
		Proinflammatory Panel 1 (rat) Control 1	1180	pg/mL
		Proinflammatory Panel 1 (rat) Control 2	569	pg/mL
		Proinflammatory Panel 1 (rat) Control 3	289	pg/mL
8	IL-10	Calibrator	27700	pg/mL
		Proinflammatory Panel 1 (rat) Control 1	23300	pg/mL
		Proinflammatory Panel 1 (rat) Control 2	7020	pg/mL
		Proinflammatory Panel 1 (rat) Control 3	2120	pg/mL
9	IL-13	Calibrator	1610	pg/mL
		Proinflammatory Panel 1 (rat) Control 1	1370	pg/mL
		Proinflammatory Panel 1 (rat) Control 2	400	pg/mL
		Proinflammatory Panel 1 (rat) Control 3	123	pg/mL
10	TNF- $\alpha$	Calibrator	1200	pg/mL
		Proinflammatory Panel 1 (rat) Control 1	868	pg/mL
		Proinflammatory Panel 1 (rat) Control 2	266	pg/mL
		Proinflammatory Panel 1 (rat) Control 3	87.7	pg/mL

Controls tested may not be the same lot as shipped.

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## Standard Curve Data:

IFN- $\gamma$ - Spot 1		
Conc. pg/mL	ECL Signal	%CV
5790	758,000	4.0
1450	205,000	4.2
362	50,500	3.3
90.5	13,800	5.2
22.6	4,500	4.9
5.65	2,160	8.2
1.41	1,570	8.5
0.00	1,360	9.8

IL-1 $\beta$ - Spot 2		
Conc. pg/mL	ECL Signal	%CV
13300	1,560,000	3.4
3330	330,000	2.5
831	59,000	2.5
208	12,500	3.7
52.0	3,620	2.1
13.0	1,340	2.5
3.25	769	3.7
0.00	569	7.9

IL-4 - Spot 4		
Conc. pg/mL	ECL Signal	%CV
1100	901,000	2.8
275	240,000	2.2
68.8	47,900	2.6
17.2	10,600	4.5
4.30	3,210	3.5
1.07	1,500	3.6
0.269	1,060	5.5
0.00	967	12.0

IL-5 - Spot 5		
Conc. pg/mL	ECL Signal	%CV
9230	2,180,000	3.6
2310	700,000	2.4
577	130,000	3.1
144	17,800	4.7
36.1	2,740	2.6
9.01	918	2.4
2.25	691	3.6
0.00	620	6.3

IL-6 - Spot 6		
Conc. pg/mL	ECL Signal	%CV
13200	340,000	2.9
3300	73,600	2.3
825	17,100	2.3
206	4,780	2.3
51.6	1,860	2.7
12.9	1,090	3.0
3.22	876	3.6
0.00	818	5.3

KC/GRO - Spot 7		
Conc. pg/mL	ECL Signal	%CV
2770	1,250,000	4.9
693	575,000	5.7
173	150,000	4.6
43.3	35,500	4.8
10.8	10,100	3.3
2.71	3,240	2.6
0.676	1,590	4.5
0.00	960	7.1

IL-10 - Spot 8		
Conc. pg/mL	ECL Signal	%CV
27700	1,270,000	3.7
6930	366,000	2.9
1730	89,800	3.3
433	24,000	4.2
108	7,440	4.9
27.1	2,880	8.2
6.76	1,660	12.0
0.00	1,280	16.0

IL-13 - Spot 9		
Conc. pg/mL	ECL Signal	%CV
1610	1,370,000	3.8
403	286,000	1.5
101	48,000	1.9
25.2	9,560	2.6
6.29	2,790	2.5
1.57	1,180	3.4
0.393	782	4.4
0.00	640	6.8

TNF- $\alpha$ - Spot 10		
Conc. pg/mL	ECL Signal	%CV
1200	664,000	2.6
300	166,000	2.0
75.0	40,600	2.7
18.8	10,500	3.0
4.69	3,340	2.4
1.17	1,390	3.2
0.293	887	6.9
0.00	684	7.5

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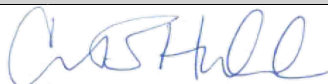
### Components:

Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 2 (rat) Plate	Z0047176	2-8°C	28 Feb 2022
Anti-rat IFN- $\gamma$ Antibody	D0081346	2-8°C	31 May 2023
Anti-rat IL-1 $\beta$ Antibody	D0081348	2-8°C	31 Mar 2023
Anti-rat IL-4 Antibody	D0081347	2-8°C	28 Feb 2023
Anti-rat IL-5 Antibody	D0081349	2-8°C	30 Apr 2023
Anti-rat IL-6 Antibody	D0081409	2-8°C	31 May 2023
Anti-rat KC/GRO Antibody	D0081351	2-8°C	30 Apr 2023
Anti-rat IL-10 Antibody	D0081352	2-8°C	30 Apr 2023
Anti-rat IL-13 Antibody	D0081353	2-8°C	30 Apr 2023
Anti-rat TNF- $\alpha$ Antibody	D0081354	2-8°C	30 Apr 2023
Proinflammatory Panel 1 (rat) Calibrator Blend	A0080177	2-8°C	31 Dec 2023
Blocker H	R0100017	Room Temperature	31 May 2021
Diluent 42	M0420012	$\leq -10^{\circ}\text{C}$	30 Sep 2021
Diluent 40	M0400014	$\leq -10^{\circ}\text{C}$	31 Aug 2021
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 (rat) Control 1	Not Kit Specific
Proinflammatory Panel 1 (rat) Control 2	Not Kit Specific
Proinflammatory Panel 1 (rat) 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>	Carissa Hubbard	Quality		27 DEC 2019