



CERTIFICATE OF ANALYSIS

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COA-04765

Product Description: Proinflammatory Panel 1 (human) Kit V-PLEX™ and V-PLEX Plus
Kit Catalog Numbers: K15049D-1, K15049D-2, K15049D-4, K15049G-1, K15049G-2, K15049G-4
Kit Lot Number: K0080217
Expiration Date: 31 DEC 2015

Acceptance Data:

			Assay				
Metric		Specifications	hu IFN- γ	hu IL-1 β	hu IL-2	hu IL-4	hu IL-6
% Recovery Concentration	Calibrators	80% - 120%	Pass	Pass	Pass	Pass	Pass
	Controls	80% - 120%	Pass	Pass	Pass	Pass	Pass
	ULOQ	80% - 120%	Pass	Pass	Pass	Pass	Pass
	LLOQ	80% - 120%	Pass	Pass	Pass	Pass	Pass
% Recovery CV	Calibrators	< 20%	Pass	Pass	Pass	Pass	Pass
	Controls	< 20%	Pass	Pass	Pass	Pass	Pass
	ULOQ	< 20%	Pass	Pass	Pass	Pass	Pass
	LLOQ	< 20%	Pass	Pass	Pass	Pass	Pass
Non-specific binding		< 1%	Pass	Pass	Pass	Pass	Pass

			Assay				
Metric		Specifications	hu IL-8	hu IL-10	hu IL-12p70	hu IL-13	hu TNF- α
% Recovery Concentration	Calibrators	80% - 120%	Pass	Pass	Pass	Pass	Pass
	Controls	80% - 120%	Pass	Pass	Pass	Pass	Pass
	ULOQ	80% - 120%	Pass	Pass	Pass	Pass	Pass
	LLOQ	80% - 120%	Pass	Pass	Pass	Pass	Pass
% Recovery CV	Calibrators	< 20%	Pass	Pass	Pass	Pass	Pass
	Controls	< 20%	Pass	Pass	Pass	Pass	Pass
	ULOQ	< 20%	Pass	Pass	Pass	Pass	Pass
	LLOQ	< 20%	Pass	Pass	Pass	Pass	Pass
Non-specific binding		< 1%	Pass	Pass	Pass	Pass	Pass

Concentration of Materials Tested:

Units = pg/mL	Assay									
	hu IFN- γ	hu IL-1 β	hu IL-2	hu IL-4	hu IL-6	hu IL-8	hu IL-10	hu IL-12p70	hu IL-13	hu TNF- α
Reconstituted Calibrator	1460	495	1460	198	767	495	334	421	466	312
Reconstituted Control 1 (A00C0247)	401	136	287	55.6	246	157	98.3	109	152	60.5
Reconstituted Control 2 (A00C0248)	106	32.8	70.5	13.2	56.8	37.6	24.3	23.6	33.2	12.4
Reconstituted Control 3 (A00C0249)	39.9	7.71	17.0	3.19	11.8	8.52	5.44	7.26	15.2	3.88
ULOQ	1170	395	1170	158	612	395	267	336	372	249
LLOQ	2.97	1.01	0.89	0.121	0.468	0.302	0.204	0.857	1.06	0.635



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Standard Curve Data from Kit QC:

hu IFN- γ		
Conc., (pg/mL)	Average Signal	%CV
1460	348 223	2.3
365	95 434	2.1
91.3	24 921	2.3
22.8	6665	2.5
5.70	1879	3.2
1.43	745	7.8
0.356	414	8.7
0	318	12.6

hu IL-1 β		
Conc., (pg/mL)	Average Signal	%CV
495	1 558 018	3.7
124	379 508	2.8
30.9	96 416	3.2
7.73	24 774	3.6
1.93	6673	3.1
0.483	2238	8.0
0.121	971	7.3
0	531	8.0

hu IL-2		
Conc., (pg/mL)	Average Signal	%CV
1460	1 122 103	2.7
365	314 979	2.4
91.3	84 586	3.0
22.8	21 604	3.3
5.70	5863	2.4
1.43	1715	2.8
0.356	655	5.7
0	290	13.9

hu IL-4		
Conc., (pg/mL)	Average Signal	%CV
198	547 556	5.4
49.5	162 636	3.1
12.4	43 648	2.7
3.09	11 250	3.7
0.773	2895	4.5
0.193	853	8.9
0.048	341	11.0
0	154	19.3

hu IL-6		
Conc., (pg/mL)	Average Signal	%CV
767	1 273 507	3.7
192	277 661	3.0
47.9	58 861	3.1
12.0	13 462	3.1
3.00	3425	3.3
0.749	1031	4.7
0.187	409	6.8
0	190	12.8

hu IL-8		
Conc., (pg/mL)	Average Signal	%CV
495	630 218	2.7
124	153 081	2.1
30.9	38 539	2.7
7.73	9729	2.8
1.93	2632	2.3
0.483	824	4.4
0.121	363	6.6
0	199	14.2

hu IL-10		
Conc., (pg/mL)	Average Signal	%CV
334	602 463	1.7
83.5	173 277	2.5
20.9	46 506	3.1
5.22	11 557	3.2
1.30	3258	2.3
0.326	994	4.0
0.082	435	8.5
0	241	14.9

hu IL-12p70		
Conc., (pg/mL)	Average Signal	%CV
421	231 923	5.2
105	67 309	3.3
26.3	18 207	2.9
6.58	4830	3.6
1.64	1309	4.8
0.411	490	18.4
0.103	226	16.1
0	173	27.5

hu IL-13		
Conc., (pg/mL)	Average Signal	%CV
466	761 187	3.1
117	157 157	2.3
29.1	21 595	3.3
7.28	2853	4.0
1.82	705	10.4
0.455	420	27.2
0.114	214	20.5
0	178	17.4

hu TNF- α		
Conc., (pg/mL)	Average Signal	%CV
312	368 634	2.7
78.0	88 986	3.1
19.5	22 540	3.1
4.88	5676	3.5
1.22	1568	3.3
0.305	552	13.1
0.076	232	14.6
0	144	22.6



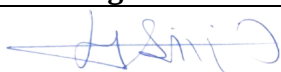
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Proinflammatory Panel 1 (human) Kit V-PLEX Components			
Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (human) Plate	Z0045411	2-8°C	31 JAN 2017
Anti-hu IFN- γ Antibody	D0080357	2-8°C	30 NOV 2016
Anti-hu IL-1 β Antibody	D0080358	2-8°C	30 NOV 2016
Anti-hu IL-2 Antibody	D0080137	2-8°C	31 DEC 2015
Anti-hu IL-4 Antibody	D0080243	2-8°C	30 APR 2016
Anti-hu IL-6 Antibody	D0080296	2-8°C	31 AUG 2016
Anti-hu IL-8 Antibody	D0080297	2-8°C	31 AUG 2016
Anti-hu IL-10 Antibody	D0080298	2-8°C	31 AUG 2016
Anti-hu IL-12p70 Antibody	D0080134	2-8°C	31 DEC 2015
Anti-hu IL-13 Antibody	D0080300	2-8°C	31 AUG 2016
Anti-hu TNF- α Antibody	D0080301	2-8°C	31 AUG 2016
Proinflammatory Panel 1 (human) Calibrator Blend	A0080040	2-8°C	31 MAY 2019
Diluent 2	M0020083	$\leq -10^{\circ}\text{C}$	31 JUL 2016
Diluent 3	M0030061	$\leq -10^{\circ}\text{C}$	31 AUG 2016
MSD Read Buffer T (4X)	Not Kit Specific	Room Temperature	N/A
Additional Components Included in V-PLEX Plus			
Wash Buffer (20X), 100 mL	Not Kit Specific	Room Temperature	N/A
Plate Seals	Not Kit Specific	Room Temperature	N/A
Proinflammatory Panel 1 (human) Control 1	Not Kit Specific; See Separate Control Pack COA		
Proinflammatory Panel 1 (human) Control 2			
Proinflammatory Panel 1 (human) Control 3			

Statement: The above kit lot was tested using MSD procedures and it conforms to MSD's specifications. The above product is intended for Research Use Only. Not for use in Diagnostic Procedures.

	Name	Function	Signature	Date
Review/Approval	Patricio Tituana	Quality Control		16 SEP 2014