



CERTIFICATE OF ANALYSIS

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COA-04398

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: K0080133
Expiration Date: 31 JUL 2016

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	1410	510	1470	216	769	507	324	413	530	316
Reconstituted Control 1 (A00C0213)	426	146	280	64.1	235	155	99.5	141	157	69.5
Reconstituted Control 2 (A00C0214)	115	39.4	78.2	17.6	63.1	40.7	26.6	37.2	35.7	17.9
Reconstituted Control 3 (A00C0215)	25.1	9.46	23.0	4.54	15.2	10.5	6.61	11.4	10.0	5.20
ULOQ	1110	400	1150	170	604	398	254	324	416	248
LLOQ	2.90	1.05	0.890	0.444	0.466	0.307	0.196	1.22	1.57	0.649



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Standard Curve Data from Kit QC:

hu IFN- γ		
Conc., (pg/mL)	Average Signal	%CV
1410	263 369	2.5
353	72 319	2.2
88.1	18 427	2.3
22.0	4857	2.4
5.51	1424	2.9
1.38	572	4.5
0.344	353	7.6
0	279	9.2

hu IL-1 β		
Conc., (pg/mL)	Average Signal	%CV
510	1 353 654	3.8
128	325 183	2.5
31.9	81 142	2.3
7.97	20 658	2.5
1.99	5566	3.0
0.498	1748	4.3
0.125	809	8.7
0	589	19.7

hu IL-2		
Conc., (pg/mL)	Average Signal	%CV
1470	845 483	5.0
368	233 986	7.2
91.9	60 664	6.9
23.0	15 286	7.5
5.74	4149	4.8
1.44	1156	7.6
0.359	444	8.7
0	188	8.5

hu IL-4		
Conc., (pg/mL)	Average Signal	%CV
216	510 615	4.9
54.0	152 100	3.7
13.5	39 036	7.5
3.38	10 543	4.3
0.844	2610	6.7
0.211	777	8.6
0.0527	302	9.6
0	136	18.7

hu IL-6		
Conc., (pg/mL)	Average Signal	%CV
769	1 082 910	5.1
192	229 265	3.1
48.1	45 832	3.7
12.0	10 482	3.2
3.00	2700	2.8
0.751	797	4.1
0.188	324	9.1
0	157	10.6

hu IL-8		
Conc., (pg/mL)	Average Signal	%CV
507	526 924	2.5
127	128 269	2.3
31.7	31 547	2.1
7.92	8049	1.9
1.98	2189	2.8
0.495	676	3.7
0.124	301	6.8
0	181	18.3

hu IL-10		
Conc., (pg/mL)	Average Signal	%CV
324	548 882	1.5
81.0	155 592	1.4
20.3	40 940	2.7
5.06	10 492	2.3
1.27	2860	2.3
0.316	880	5.1
0.0791	404	4.9
0	224	10.4

hu IL-12p70		
Conc., (pg/mL)	Average Signal	%CV
413	194 485	8.3
103	57 081	4.8
25.8	14 429	9.0
6.45	3797	8.5
1.61	1131	7.1
0.403	403	15.6
0.101	269	23.7
0	211	31.5

hu IL-13		
Conc., (pg/mL)	Average Signal	%CV
530	735 315	3.2
133	156 625	5.1
33.1	21 870	2.8
8.28	2790	3.6
2.07	686	4.7
0.518	320	18.0
0.129	213	15.0
0	194	28.9

hu TNF- α		
Conc., (pg/mL)	Average Signal	%CV
316	354 507	3.4
79.0	86 268	2.5
19.8	21 303	2.7
4.94	5398	2.4
1.23	1496	3.3
0.309	491	9.9
0.0771	250	14.6
0	159	24.5



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Proinflammatory Panel 1 (human) Kit V-PLEX Components			
Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (human) Plate	Z0045213	2-8°C	31 AUG 2016
Anti-hu IFN- γ Antibody	D0080292	2-8°C	31 AUG 2016
Anti-hu IL-1 β Antibody	D0080293	2-8°C	31 AUG 2016
Anti-hu IL-2 Antibody	D0080294	2-8°C	31 AUG 2016
Anti-hu IL-4 Antibody	D0080295	2-8°C	31 AUG 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	D0080299	2-8°C	31 AUG 2016
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	A0080036	2-8°C	31 MAR 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	Dana Short	Quality Control		12 MAY 2014