



CERTIFICATE OF ANALYSIS

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COA-05052

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: K0080259
Expiration Date: 31 AUG 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	1510	520	1460	207	749	546	313	404	489	311
Reconstituted Control 1 (A00C0273)	345	129	195	56.5	128	129	95.8	122	146	51.4
Reconstituted Control 2 (A00C0274)	123	52.2	77.6	17.5	58.3	37.6	24.7	33.7	53.4	16.0
Reconstituted Control 3 (A00C0293)	37.9	8.62	2.96	2.59	8.27	5.19	3.69	4.75	18.6	1.76
ULOQ	1200	415	1160	165	597	435	250	322	390	248
LLOQ	3.13	1.08	0.890	0.126	0.457	0.333	0.191	0.836	1.01	0.644



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Standard Curve Data from Kit QC:

hu IFN- γ		
Conc., (pg/mL)	Average Signal	%CV
1510	319 790	2.4
378	87 191	2.3
94.4	22 392	2.4
23.6	5683	2.1
5.90	1525	3.6
1.47	543	5.6
0.369	287	10.0
0	215	22.7

hu IL-1 β		
Conc., (pg/mL)	Average Signal	%CV
520	1 334 727	2.8
130	327 613	3.7
32.5	82 743	2.5
8.13	21 058	4.1
2.03	6311	4.4
0.508	2676	8.8
0.127	1702	4.5
0	1396	9.0

hu IL-2		
Conc., (pg/mL)	Average Signal	%CV
1460	939 189	2.9
365	261 427	2.8
91.3	69 396	2.8
22.8	16 885	4.0
5.70	4596	3.2
1.43	1385	3.0
0.356	554	4.8
0	284	8.0

hu IL-4		
Conc., (pg/mL)	Average Signal	%CV
207	517 497	6.6
51.8	155 157	6.0
12.9	41 260	6.2
3.23	10 392	6.6
0.809	2534	6.5
0.202	783	10.5
0.051	281	9.9
0	141	32.6

hu IL-6		
Conc., (pg/mL)	Average Signal	%CV
749	1 084 190	3.3
187	246 122	3.3
46.8	55 550	4.1
11.7	12 784	2.4
2.93	3165	3.7
0.731	920	3.4
0.183	343	4.9
0	156	13.0

hu IL-8		
Conc., (pg/mL)	Average Signal	%CV
546	556 280	2.2
137	141 196	2.5
34.1	35 701	2.3
8.53	8682	2.9
2.13	2346	3.3
0.533	693	5.5
0.133	268	5.9
0	141	13.6

hu IL-10		
Conc., (pg/mL)	Average Signal	%CV
313	482 307	2.9
78.3	136 010	2.0
19.6	35 672	2.8
4.89	8518	3.6
1.22	2363	2.9
0.306	719	5.4
0.076	323	8.4
0	178	13.7

hu IL-12p70		
Conc., (pg/mL)	Average Signal	%CV
404	214 528	4.8
101	62 167	3.7
25.3	16 470	4.0
6.31	4166	3.5
1.58	1097	4.7
0.395	381	8.5
0.099	201	17.4
0	165	25.9

hu IL-13		
Conc., (pg/mL)	Average Signal	%CV
489	771 582	4.2
122	158 915	3.2
30.6	22 050	2.8
7.64	2740	4.6
1.91	610	4.0
0.478	241	8.5
0.119	159	13.6
0	134	15.0

hu TNF- α		
Conc., (pg/mL)	Average Signal	%CV
311	293 643	2.7
77.8	70 664	3.7
19.4	17 454	2.7
4.86	4179	2.9
1.21	1163	4.3
0.304	412	21.4
0.076	189	11.4
0	177	29.8



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Proinflammatory Panel 1 (human) Kit V-PLEX Components			
Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (human) Plate	Z0045508	2-8°C	30 APR 2017
Anti-hu IFN- γ Antibody	D0080363	2-8°C	31 MAR 2017
Anti-hu IL-1 β Antibody	D0080358	2-8°C	30 NOV 2016
Anti-hu IL-2 Antibody	D0080381	2-8°C	31 MAR 2017
Anti-hu IL-4 Antibody	D0080360	2-8°C	30 NOV 2016
Anti-hu IL-6 Antibody	D0080384	2-8°C	30 APR 2017
Anti-hu IL-8 Antibody	D0080380	2-8°C	31 MAR 2017
Anti-hu IL-10 Antibody	D0080298	2-8°C	31 AUG 2016
Anti-hu IL-12p70 Antibody	D0080364	2-8°C	30 NOV 2016
Anti-hu IL-13 Antibody	D0080365	2-8°C	31 DEC 2016
Anti-hu TNF- α Antibody	D0080362	2-8°C	31 MAR 2017
Proinflammatory Panel 1 (human) Calibrator Blend	A0080045	2-8°C	30 NOV 2019
Diluent 2	M0020085	$\leq -10^{\circ}\text{C}$	31 JAN 2017
Diluent 3	M0030063	$\leq -10^{\circ}\text{C}$	30 APR 2017
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	Caitlin Hansen	Quality Control		19 DEC 2014