



CERTIFICATE OF ANALYSIS

Product Description: Proinflammatory Panel 1 (mouse) Kit V-PLEX™ and V-PLEX Plus
Kit Catalog Numbers: K15048D-1, K15048D-2, K15048D-4, K15048G-1, K15048G-2, K15048G-4
Kit Lot Number: K0080094
Expiration Date: 31 MAY 2016

Acceptance Data:

Metric		Specifications	Assay				
			ms IFN- γ	ms IL-1 β	ms IL-2	ms IL-4	ms IL-5
% Recovery Concentration	Calibrators	80% - 120%	Pass	Pass	Pass	Pass	Pass
	Controls	75% - 125%	Pass	Pass	Pass	Pass	Pass
	ULOQ	75% - 125%	Pass	Pass	Pass	Pass	Pass
	LLOQ	75% - 125%	Pass	Pass	Pass	Pass	Pass
% Recovery CV	Calibrators	< 20%	Pass	Pass	Pass	Pass	Pass
	Controls	< 25%	Pass	Pass	Pass	Pass	Pass
	ULOQ	< 25%	Pass	Pass	Pass	Pass	Pass
	LLOQ	< 25%	Pass	Pass	Pass	Pass	Pass
Non-specific binding		< 1%	Pass	Pass	Pass	Pass	Pass

Metric		Specifications	Assay				
			ms IL-6	ms KC/GRO	ms IL-10	ms IL-12p70	ms TNF- α
% Recovery Concentration	Calibrators	80% - 120%	Pass	Pass	Pass	Pass	Pass
	Controls	75% - 125%	Pass	Pass	Pass	Pass	Pass
	ULOQ	75% - 125%	Pass	Pass	Pass	Pass	Pass
	LLOQ	75% - 125%	Pass	Pass	Pass	Pass	Pass
% Recovery CV	Calibrators	< 20%	Pass	Pass	Pass	Pass	Pass
	Controls	< 25%	Pass	Pass	Pass	Pass	Pass
	ULOQ	< 25%	Pass	Pass	Pass	Pass	Pass
	LLOQ	< 25%	Pass	Pass	Pass	Pass	Pass
Non-specific binding		< 1%	Pass	Pass	Pass	Pass	Pass

Concentration of Materials Tested:

Units = pg/mL	Assay									
Samples	ms IFN- γ	ms IL-1 β	ms IL-2	ms IL-4	ms IL-5	ms IL-6	ms KC/GRO	ms IL-10	ms IL-12p70	ms TNF- α
Reconstituted Calibrator	829	1480	2180	1340	832	3710	1720	2570	24 000	506
Reconstituted Control 1 (A00C0181)	1380	1590	2630	1610	985	5720	2130	2860	25 600	431
Reconstituted Control 2 (A00C0182)	94.4	120	193	143	60.1	263	221	586	3550	98.0
Reconstituted Control 3 (A00C0183)	9.22	7.79	17.7	21.6	3.73	29.2	28.3	126	572	21.2
ULOQ	712	1270	1870	1150	714	3180	1480	2210	20 600	434
LLOQ	0.388	0.693	1.02	0.627	0.389	1.74	0.805	4.92	179	0.968



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Standard Curve Data from Kit QC:

ms IFN- γ		
Conc., (pg/mL)	Average Signal	%CV
829	1 266 897	2.4
207	403 773	1.8
51.8	106 294	3.2
13.0	27 303	3.0
3.24	6795	1.8
0.810	1834	2.5
0.202	533	7.1
0	121	24.7

ms IL-1 β		
Conc., (pg/mL)	Average Signal	%CV
1480	773 908	2.6
370	193 240	2.4
92.5	48 223	1.6
23.1	11 811	2.6
5.78	3068	3.6
1.45	840	3.5
0.361	289	7.6
0	110	20.3

ms IL-2		
Conc., (pg/mL)	Average Signal	%CV
2180	853 203	3.0
545	222 142	2.5
136	51 241	1.9
34.1	11 514	3.7
8.52	3110	5.0
2.13	835	4.5
0.532	308	10.7
0	135	21.1

ms IL-4		
Conc., (pg/mL)	Average Signal	%CV
1340	592 229	4.0
335	162 128	4.5
83.8	41 603	3.8
20.9	10 614	5.5
5.23	2846	4.6
1.31	914	5.5
0.327	430	7.4
0	269	7.3

ms IL5		
Conc., (pg/mL)	Average Signal	%CV
832	527 090	5.5
208	180 885	3.8
52.0	41 774	6.3
13.0	10 093	3.2
3.25	2610	4.1
0.813	696	3.1
0.203	238	8.3
0	84	23.6

ms IL-6		
Conc., (pg/mL)	Average Signal	%CV
3710	453 047	1.9
928	88 170	2.7
232	19 823	2.3
58.0	4856	4.1
14.5	1525	3.0
3.62	586	4.0
0.906	356	5.5
0	282	9.3

ms KC/GRO		
Conc., (pg/mL)	Average Signal	%CV
1720	1 151 221	3.0
430	239 739	2.8
108	47 850	3.0
26.9	10 700	4.3
6.72	2929	3.7
1.68	934	5.2
0.420	456	5.6
0	300	10.1

ms IL-10		
Conc., (pg/mL)	Average Signal	%CV
2570	449 668	8.1
643	103 671	6.2
161	25 032	6.2
40.2	6518	6.6
10.0	1977	5.3
2.51	862	5.0
0.627	589	7.7
0	482	7.1

ms IL-12p70		
Conc., (pg/mL)	Average Signal	%CV
24 000	535 329	3.2
6000	96 480	2.9
1500	15 359	3.2
375	2990	7.3
93.8	865	4.7
23.4	327	6.1
5.86	208	15.4
0	170	18.9

ms TNF- α		
Conc., (pg/mL)	Average Signal	%CV
506	348 270	2.4
127	69 921	2.6
31.6	15 768	3.5
7.91	3764	5.4
1.98	1131	3.7
0.494	427	9.5
0.124	253	12.7
0	194	19.0



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Proinflammatory Panel 1 (mouse) Kit V-PLEX Components			
Description	Lot Number	Storage Temperature	Expiration Date
Proinflammatory Panel 1 (mouse) Plate	Z0045228	2-8°C	31 AUG 2016
Anti-ms IFN- γ Antibody	D0080197	2-8°C	31 MAY 2016
Anti-ms IL-1 β Antibody	D0080198	2-8°C	31 MAY 2016
Anti-ms IL-2 Antibody	D0080199	2-8°C	31 MAY 2016
Anti-ms IL-4 Antibody	D0080121	2-8°C	30 JUN 2016
Anti-ms IL-5 Antibody	D0080201	2-8°C	31 MAY 2016
Anti-ms IL-6 Antibody	D0080202	2-8°C	31 MAY 2016
Anti-ms KC/GRO Antibody	D0080203	2-8°C	31 MAY 2016
Anti-ms IL-10 Antibody	D0080204	2-8°C	31 MAY 2016
Anti-ms IL-12p70 Antibody	D0080205	2-8°C	31 MAY 2016
Anti-ms TNF- α Antibody	D0080206	2-8°C	31 MAY 2016
Proinflammatory Panel 1 (mouse) Calibrator Blend	A0080029	2-8°C	30 SEP 2018
Diluent 41	M0410005	$\leq -10^{\circ}\text{C}$	30 JUN 2016
Diluent 45	M0450004	$\leq -10^{\circ}\text{C}$	30 JUN 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 (mouse) Control 1	Not Kit Specific; See Separate Control Pack COA		
Proinflammatory Panel 1 (mouse) Control 2			
Proinflammatory Panel 1 (mouse) 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		14 MAY 2014