



# MOUSE HIGH SENSITIVITY CYTOKINE PANEL 1

## CERTIFICATE OF ANALYSIS

(Part ID: M102-K; Lot ID: K22538)

### Use

For the detection of 13 mouse cytokines/chemokines (IFN $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-10, IL-12p40, IL-12p70, IL-13, KC/GRO, & TNF $\alpha$ ) in serum, plasma, tissue homogenates, and bronchial lavage.

### Kit Components

Note:

Kit Components			
Kit Component	Part Number	Lot Number	Number Supplied
Mouse High Sensitivity Cytokine Panel 1 Beads	M102-B	K22539	1
Mouse High Sensitivity Cytokine Panel 1 Detection	M102-D	K22540	1
Mouse High Sensitivity Cytokine Panel 1 Standard	M102-S	K22602	1
Mouse High Sensitivity Cytokine Panel 1 Control 1	M102-C1	K22542	1
Mouse High Sensitivity Cytokine Panel 1 Control 2	M102-C2	K22543	1
Mouse High Sensitivity Cytokine Panel 1 Standard Diluent	M102-SCD	K22603	1
Mouse High Sensitivity Cytokine Panel 1 Blocker	M102-BL	K22601	1
Streptavidin-PE	SAPE4-250	K22546	1
Sample Diluent	B116-15		1
Assay Buffer 10X	B110-25		1
Clear Bottom Black Assay Plate	NA	NA	1
Plate Sealer	NA	NA	3

### Storage and Stability

Store kit at 2°C - 8°C.

**Expiration Date: 1 year from date of receipt;** Do not use beyond the expiration date



**Standard Concentrations:**

Standard Level	IFN $\gamma$ [pg/mL]	IL-1 $\alpha$ [pg/mL]	IL-1 $\beta$ [pg/mL]	IL-10 [pg/mL]	IL-12p40 [pg/mL]	IL-12p70 [pg/mL]	IL-13 [pg/mL]
S8	750	1500	3000	1250	5000	15000	1000
S7	214	429	857	357	1430	4290	286
S6	61	123	245	102	409	1230	82
S5	18	35	70	29	117	351	23
S4	5.0	10	20	8.3	33	100	6.7
S3	1.4	2.9	5.7	2.4	9.5	29	1.9
S2	0.41	0.82	1.6	0.68	2.7	8.2	0.54
S1	0.12	0.23	0.47	0.19	0.78	2.3	0.16

  

Standard Level	IL-2 [pg/mL]	IL-4 [pg/mL]	IL-5 [pg/mL]	IL-6 [pg/mL]	KC/GRO [pg/mL]	TNF $\alpha$ [pg/mL]
S8	1000	330	1250	1500	1500	500
S7	286	94	357	429	429	143
S6	82	27	102	123	123	41
S5	23	7.7	29	35	35	12
S4	6.7	2.2	8.3	10	10	3.3
S3	1.9	0.63	2.4	2.9	2.9	0.95
S2	0.54	0.18	0.68	0.82	0.82	0.27
S1	0.16	0.051	0.19	0.23	0.23	0.078

**Control Ranges:**

Control	Range	IFN $\gamma$ [pg/mL]	IL-1 $\alpha$ [pg/mL]	IL-1 $\beta$ [pg/mL]	IL-10 [pg/mL]	IL-12p40 [pg/mL]	IL-12p70 [pg/mL]	IL-13 [pg/mL]
1	Low	3.4	3.9	12	4.8	61	44	8.2
	High	10	12	35	14	184	133	24
2	Low	42	238	279	190	562	1392	44
	High	127	715	837	571	1685	4175	133

  

Control	Range	IL-2 [pg/mL]	IL-4 [pg/mL]	IL-5 [pg/mL]	IL-6 [pg/mL]	KC/GRO [pg/mL]	TNF $\alpha$ [pg/mL]
1	Low	3.6	1.1	6.3	2.9	10	5.4
	High	11	3.2	19	8.6	30	16
2	Low	85	51	204	60	182	95
	High	255	153	613	180	547	285

**Lowest Detectable Dose:**

LDD	IFN $\gamma$ [pg/mL]	IL-1 $\alpha$ [pg/mL]	IL-1 $\beta$ [pg/mL]	IL-10 [pg/mL]	IL-12p40 [pg/mL]	IL-12p70 [pg/mL]	IL-13 [pg/mL]
With Dilution	2.3	3.3	7.5	1.5	40	41	1.9
Without Dilution	0.46	0.65	1.5	0.30	8.0	8.2	0.38

  

LDD	IL-2 [pg/mL]	IL-4 [pg/mL]	IL-5 [pg/mL]	IL-6 [pg/mL]	KC/GRO [pg/mL]	TNF $\alpha$ [pg/mL]
With Dilution	2.9	0.50	1.0	1.0	6.0	0.50
Without Dilution	0.58	0.10	0.20	0.20	1.2	0.10



**Lowest Limit of Quantitation:**

LLOQ	IFN $\gamma$ [pg/mL]	IL-1 $\alpha$ [pg/mL]	IL-1 $\beta$ [pg/mL]	IL-10 [pg/mL]	IL-12p40 [pg/mL]	IL-12p70 [pg/mL]	IL-13 [pg/mL]
With Dilution	2.3	6.0	7.5	1.5	40	41	6.0
Without Dilution	0.46	1.2	1.5	0.30	8.0	8.2	1.2
LLOQ	IL-2 [pg/mL]	IL-4 [pg/mL]	IL-5 [pg/mL]	IL-6 [pg/mL]	KC/GRO [pg/mL]	TNF $\alpha$ [pg/mL]	
With Dilution	4.5	0.50	1.0	1.0	6.0	0.50	
Without Dilution	0.90	0.10	0.20	0.20	1.2	0.10	

**Reference MFI Values:**

Standard and control MFI values generated on a Luminex 200 instrument using the standard (low) PMT setting. Data represents the average MFI of multiple runs at Ampersand Biosciences.

*Representative data, may vary by instrument*

MFI	IFN $\gamma$	IL-1 $\alpha$	IL-1 $\beta$	IL-10	IL-12p40	IL-12p70	IL-13
S8	11292	12914	11100	16063	16958	18439	13910
S7	4363	6048	3785	6991	8369	6087	5297
S6	1432	2255	1109	2338	3143	1633	1567
S5	433	710	327	694	969	408	442
S4	147	229	118	212	318	124	138
S3	63	87	58	72	102	45	52
S2	37	47	42	32	41	24	28
S1	32	35	40	22	27	18	22
Control 1	190	186	127	237	1082	104	322
Control 2	1903	6397	2417	7150	6811	3824	1703
MFI	IL-2	IL-4	IL-5	IL-6	KC/GRO	TNF $\alpha$	
S8	15522	9711	24023	18515	22554	10230	
S7	6966	3619	8742	8491	8414	4413	
S6	2307	1133	2148	3134	2140	1476	
S5	635	337	521	979	529	432	
S4	190	115	150	294	158	140	
S3	65	50	50	102	65	51	
S2	29	29	22	49	40	26	
S1	21	26	15	33	36	21	
Control 1	188	110	212	175	285	406	
Control 2	4382	3784	9392	3038	7065	5326	