



Mouse Cytokine Magnetic 20-Plex Panel

Technical Data Sheet

Catalog #: LMC0006M Lot #:* 860835

*Note: A letter at the end of the lot number signifies an additional packaging of this same lot.

Intended Use

This kit is comprised of components for the measurement of mouse FGF basic, GM-CSF, IFN- γ , IL-1 α , IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-10, IL-12p40/p70, IL-13, IL-17, IP-10, KC, MCP-1, MIG, MIP-1 α , TNF- α , and VEGF in serum, plasma, or tissue culture supernatant. The assay may be run alone or in combination with other Singleplex Bead Kits from Invitrogen. These reagents are intended for use in the **Luminex® 100™/200™ and FlexMAP 3D® System only.. This kit is configured for research use only and is not to be used in diagnostic procedures.**

Reagents Provided

- | | | | | |
|----|----------------------|--|--------------------|-------------------------------|
| 1. | Part #: LM319 | Description: Ms Cytokine Mag 20-Plex Antibody Bead Solution (1X) | Lot: 860838 | Size: 2.5 mL-100 tests |
| | Form: | 2.5 mL 1X bead solution in storage buffer. Contains 0.05% sodium azide as a preservative. | | |
| | Storage: | Light-sensitive material. Store at 2 to 8°C, in the dark, until the expiration date indicated on the kit. | | |
| 2. | Part #: BN319 | Description: Ms Cytokine Mag 20-Plex Biotinylated Ab Conc. (10X) | Lot: 860837 | Size: 1 mL-100 tests |
| | Form: | 1 mL of a 10X stock of Biotinylated Antibody Concentrate in Biotin Diluent. Contains 0.1% sodium azide as preservative. Concentration of antibody is matched to this lot of beads. Do not mix lots of Coated Beads and Biotinylated Antibody. | | |
| | Storage: | Store at 2 to 8°C until the expiration date indicated on the kit. | | |
| 3. | Part #: SM039 | Description: Ms 20-Plex Standard | Lot: 780776 | Size: 2 Vials |
| | Form: | Lyophilized. The proteins in this standard have been calibrated against the masses of highly purified recombinant proteins, with the respective Invitrogen ELISA kits, and NIBSC calibration standards (if available). Please see the table presented on page 3 for further information. Contains 0.1% sodium azide as a preservative. | | |
| | Storage: | Store at 2 to 8°C. Use within 1 hour after reconstitution. Discard immediately after use. | | |

Concentration of Reconstituted Standards**:

FGF basic (51,400 pg/mL)	GM-CSF (8,300 pg/mL)	IFN- γ (12,700 pg/mL)	IL-1 α (20,900 pg/mL)
IL-1 β (17,000 pg/mL)	IL-2 (8,700 pg/mL)	IL-4 (22,500 pg/mL)	IL-5 (13,800 pg/mL)
IL-6 (15,600 pg/mL)	IL-10 (10,600 pg/mL)	IL-12 (5,000 pg/mL)	IL-13 (16,800 pg/mL)
IL-17 (2,580 pg/mL)	IP-10 (14,000 pg/mL)	KC (140,000 pg/mL)	MCP-1 (18,200 pg/mL)
MIG (2,665 pg/mL)	MIP-1 α (13,000 pg/mL)	TNF- α (12,700 pg/mL)	VEGF (5,700 pg/mL)

**Important note: The concentrations of reconstituted standards are lot-specific. Please verify all concentration values entered in data analysis software.

Reconstitution of Standard: When working with serum samples, reconstitute one vial of Ms 20-Plex Standard in 1.0 mL Assay Diluent. For other sample types, such as tissue culture supernatants, reconstitute one vial of Ms 20-Plex Standard with 1.0 mL of a solution composed of 50% Assay Diluent + 50% of matrix that matches the sample matrix. Allow the standard to rehydrate for at least 10 minutes, gently vortex, then proceed with further dilution.

Recommended Starting Concentration for Standard Curve: Upon reconstitution, the starting concentrations of the standard are the values cited above. Make serial 1:3 dilutions in the same diluent used to reconstitute the standard. Use 100 μ L per assay. Refer to the User Manual for further information.

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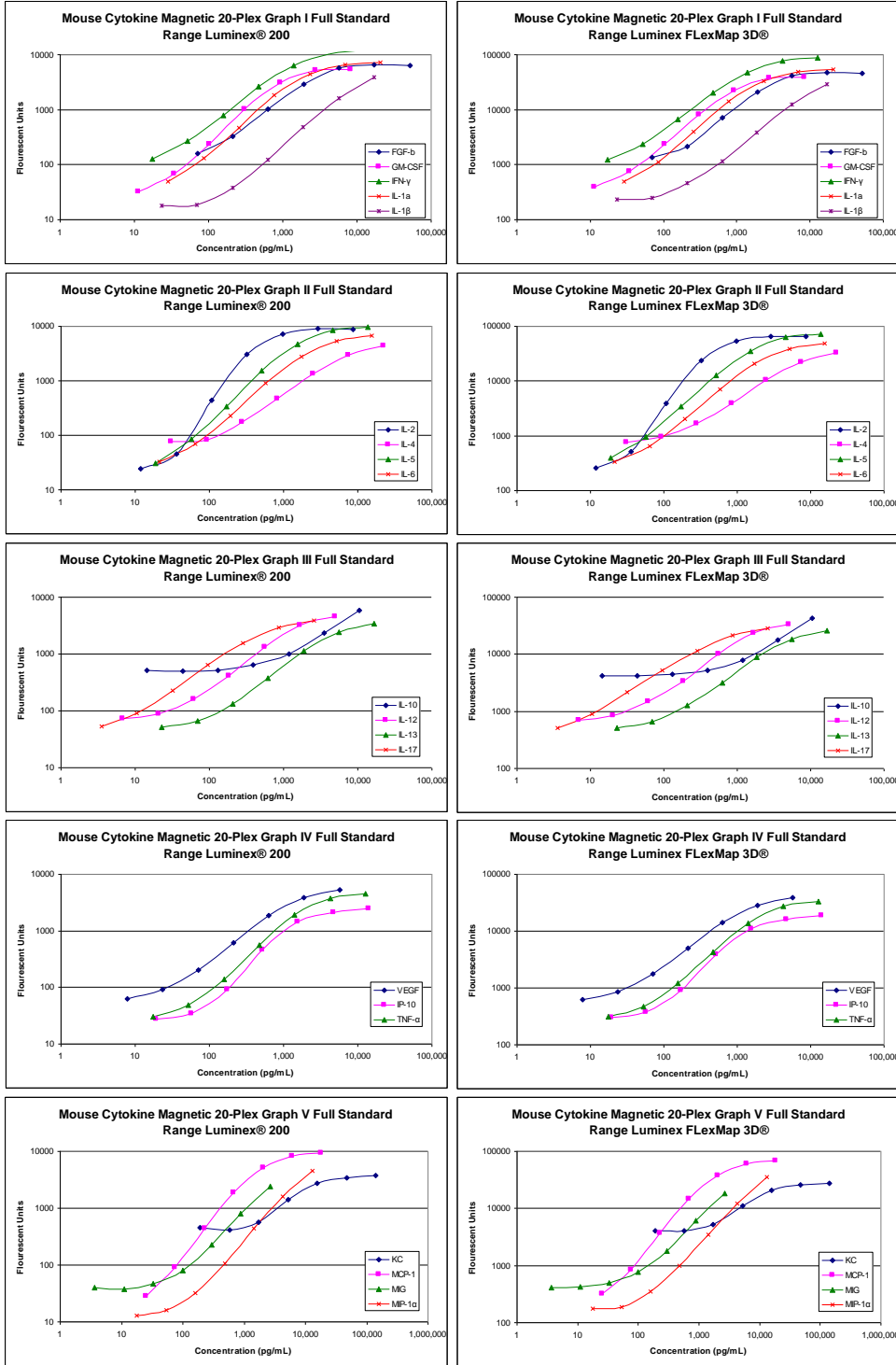
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Performance Characteristics

Typical Standard Curves: The data presented here were collected as a 20-Plex, but are presented in five groupings for clarity.



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Performance Characteristics

Cytokine	Ms FGF basic	Ms GM-CSF	Ms IFN- γ	Ms IL-1 α	Ms IL-1 β	Ms IL-2	Ms IL-4	Ms IL-5	Ms IL-6	Ms IL-10
Bead Region	12	27	38	37	13	54	77	34	19	15
Sensitivity (pg/mL)	<70	<5	<2	<10	<26	<15	<26	<6	<20	<220
Recovery (Serum)	80% -120%	70% -130%	80% -120%	80% -120%	>130%	70% -130%	Not Recommended	80%-120%	80% -120%	70% -130%
Recovery (EDTA Plasma)	80% -120%	70% -130%	70% -130%	<70%	>130%	70% -130%	Not Recommended	70%-130%	80% -120%	80% -120%
Recovery (Citrate Plasma)	80% -120%	70% -130%	80% -120%	70% -130%	>130%	70% -130%	Not Recommended	80%-120%	80% -120%	80% -120%
Recovery (Heparin Plasma)	Not Recommended	80% -120%	70% -130%	80% -120%	Not Recommended	80% -120%	Not Recommended	80%-120%	80% -120%	80% -120%
Recovery (TC)	80% -120%	80% -120%	80% -120%	80% -120%	70% -130%	80% -120%	80% -120%	80% -120%	80% -120%	70% -130%
NIBSC calibration	N/A	N/A	N/A	1ng=1100 IU	1ng=1000 IU	1ng=100 IU	1ng=10 IU	N/A	1ng=100 IU	N/A
Inter assay variation	6.4%	8.1%	9.9%	7.8%	5.2%	9.2%	8.7%	9.1%	9.6%	6.5%
Invitrogen ELISA (Catalog #)	N/A	KMC2011	N/A	KMC0911	KMC0011	KMC0021	KMC0041	KMC0051	KMC0061	KMC0101
Correlation coefficient	N/A	0.99	N/A	1.0	1.0	0.94	0.95	0.98	N/A	0.9
(Multiplication factor) *	N/A	1.0	N/A	1.0	1.0	1.0	0.8	1.0	N/A	1.0

Cytokine	Ms IL-12 (p40/p70)	Ms IL-13	Ms IL-17	Ms IP-10	Ms KC	Ms MCP-1	Ms MIG	Ms MIP-1 α	Ms TNF- α	Ms VEGF
Bead Region	20	18	25	56	67	29	63	26	52	36
Sensitivity (pg/mL)	<10	<16	<5	<16	<730	<25	<18	<18	<7	<7
Recovery (Serum)	<70%	Not Recommended	80% -120%	80% -120%	80% -120%	80% -120%	>130%	<70%	80% -120%	70% -130%
Recovery (EDTA Plasma)	Not Recommended	Not Recommended	70% -130%	80% -120%	80% -120%	80% -120%	Not Recommended	<70%	70% -130%	70% -130%
Recovery (Citrate Plasma)	Not Recommended	Not Recommended	80% -120%	80% -120%	80% -120%	80% -120%	Not Recommended	<70%	80% -120%	70% -130%
Recovery (Heparin Plasma)	<70%	Not Recommended	80% -120%	Not Recommended	Not Recommended	70% -130%	<70%	<70%	80% -120%	<70%
Recovery (TC)	80% -120%	80% -120%	80% -120%	80% -120%	80% -120%	80% -120%	80% -120%	80% -120%	80% -120%	80% -120%
NIBSC calibration	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inter assay variation	8.7%	5.1%	9.5%	9.2%	6.8%	5.7%	6.5%	8.1%	10.4%	8.1%
Invitrogen ELISA (Catalog #)	KMC0121	KMC2221	KMC3021	N/A	KMC1061	KMC1011	N/A	KMC2201	N/A	KMG0111
Correlation coefficient	0.99	0.96	1.0	N/A	1.0	0.98	N/A	0.99	N/A	0.98
(Multiplication factor) *	1.0	1.0	1.0	N/A	1.0	1.0	N/A	1.0	N/A	1.0

EQUATIONS:

Luminex Bead kit value x *Multiplication Factor = ELISA value

While the diluents included in the kits for determinations of the individual cytokines were developed to optimize quantitation and recovery, the 20-Plex assay requires the use of a common diluent. In order to determine the impact of the common diluent on quantitation, correlation studies were performed either using stimulated mouse splenocytes in RPMI + 10% FCS or recombinant protein spiked into RPMI + 10% FCS. Data described here were generated with the designated Invitrogen ELISA kit. Correlation of results obtained with the Ms Cytokine 20-Plex Panel to one's own system should be determined to arrive at an appropriate multiplication factor.

Bead Cross Talk: The analytes in the multiplex were assayed with the individual mouse cytokines, chemokines, and growth factors in the 20-Plex assay and were found to have no cross-reactivity.

Explanation of symbols

Symbol	Description	Symbol	Description
	Catalogue Number		Batch code
	Research Use Only		In vitro diagnostic medical device
	Use by		Temperature limitation
	Manufacturer		European Community authorised representative
	Without, does not contain		With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

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