

Rat Cytokine 10-Plex Panel

Technical Data Sheet

Catalog #: LRC0002 Lot #:* 820265

***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 Rat GM-CSF, IFN- γ , IL-1 α , IL-1 β , IL-2, IL-4, IL-6, IL-10, IL-12 and TNF- α 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™ or 200™ System** only. **This kit is configured for research use only and is not to be used in diagnostic procedures.**

Reagents Provided

1. **Part #:** LM217 **Description:** Rt Cytokine 10-Plex Antibody Bead Concentrate (10X) **Lot:** 820267 **Size:** 0.25 mL-100 tests

Form: 0.25 mL 10X bead concentrate solution in storage buffer. Contains 0.05% sodium azide as a preservative. See the Product Insert included in the Buffer Reagent Kit for further information.

Storage: **Light-sensitive material.** Store at 2 to 8°C, in the dark, until the expiration date indicated on the kit.

2. **Part #:** BN217 **Description:** Rt Cytokine 10-Plex Biotinylated Ab Conc. (10X) **Lot:** 820265 **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. Refer to User Manual included in the Buffer Reagent Kit for further information.

Storage: Store at 2 to 8°C until the expiration date indicated on the kit.

3. **Part #:** SM0562 **Description:** Rt Cytokine 10-Plex Standard **Lot:** 491428 **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). Refer to User Manual included in the Buffer Reagent Kit 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.

Concentrations of Reconstituted Standard**:

GM-CSF (5,320 pg/mL)	IFN- γ (4,350 pg/mL)	IL-1 α (31,660 pg/mL)	IL-1 β (16,840 pg/mL)
IL-2 (34,020 pg/mL)	IL-4 (2,040 pg/mL)	IL-6 (8,300 pg/mL)	IL-10 (36,300 pg/mL)
IL-12 (10,390 pg/mL)	TNF- α (1,260 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: Each standard curve requires one vial of Rt Cytokine 10-Plex Standard. While working with serum or plasma samples, reconstitute the standard in 1.0 mL Assay Diluent. For other sample types, such as tissue culture supernatants, reconstitute the standard in 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. Invert to mix the standard, 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 User Manual included for further information.

Explanation of symbols			
Symbol	Description	Symbol	Description
[REF]	Catalogue Number	[LOT]	Batch code
[RUO]	Research Use Only	[IVD]	In vitro diagnostic medical device
[Use by]	Use by	[Temp]	Temperature limitation
[Mfg]	Manufacturer	[EC/REP]	European Community authorised representative
[-]	Without, does not contain	[+]	With, contains
[Protect from light]	Protect from light	[Consult]	Consult accompanying documents
[IFU]	Directs the user to consult instructions for use (IFU), accompanying the product.		

For research use only. CAUTION: Not for human or animal therapeutic or diagnostic use.

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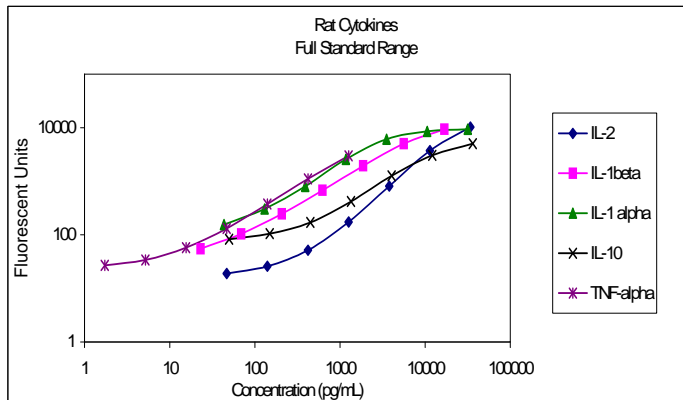
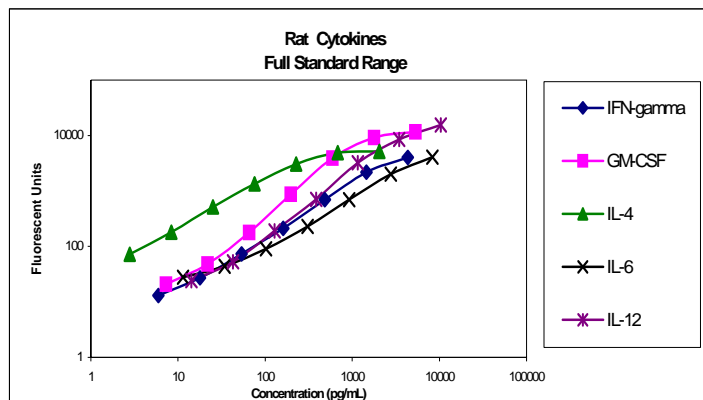
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Performance Characteristics graphs updated

Typical Standard Curves (Please Note: The data presented here were collected as a 10-Plex, but are depicted in two 5-Plex groupings for clarity.)



Cytokine	Rt GM-CSF	Rt IFN- γ	Rt IL-1 α	Rt IL-1 β	Rt IL-2	Rt IL-4	Rt IL-6	Rt IL-10	Rt IL-12	Rt TNF- α
Bead Region	27	38	4	6	54	77	19	15	20	50
Sensitivity (pg/mL)	<5	<3	<15	<10	<50	<1	<5	<50	<10	<2
Recovery (Serum)	102%	107%	112 %	122%	79.1%	103%	108%	87.9%	85.2%	83.5%
Recovery (TC)	109%	94.2%	109.8%	93.0%	108.2%	107.9%	96.6%	113.3%	88.0%	98.4%
Recovery (Citrate Plasma)	95.4%	97.6%	90.7%	104%	97.0%	98.2%	92.4%	84.8%	93.5%	78.4%
Recovery (EDTA Plasma)	87.1%	Not Recommended	98.2%	108%	87.1%	98.9%	101%	85.9%	101%	95.6%
Recovery (Heparin Plasma)	101%	98.2%	117%	112%	74.9%	98.4%	98.8%	90.7%	110%	95.3%
Inter assay variation	3.5%	4.6%	4.2%	5.9%	4.6%	4.8%	3.2%	6.4%	4.8%	5.0%
Intra assay variation	3.3%	4.2%	4.2%	4.2%	2.3%	4.6%	2.8%	4.6%	4.4%	4.7%
Invitrogen ELISA (Catalog #)	N/A	KRC4021	KRC0811	N/A	KRC0021	N/A	KRC0061	KRC0101	KRC0121	KRC3011
Correlation coefficient (Serum and TC)	N/A	0.978	0.980	N/A	0.990	N/A	0.990	0.916	Serum: 0.956 TC: 0.966	0.998
† Multiplication factor (Serum and TC)	N/A	1.694	0.596	N/A	0.399	N/A	3.671	0.896	Serum: 0.562 TC: 0.934	1.037

EQUATION: Bead kit value x †Multiplication Factor = ELISA value

Specificity: Recombinant analytes of the multiplex were assayed individually at 5 ng/mL with the Invitrogen Rat Cytokine 10-Plex Panel and all were found to have no cross-reactivity.

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