



Human IFN- α Singleplex Bead Kit

Technical Data Sheet

Catalog #: LHC4011

Lot #:* 731602

***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 human IFN- α in plasma or tissue culture supernatant. The assay may be run alone or in combination with other Singleplex Bead Kits from Invitrogen. Buffer reagents needed to complete the reaction are sold separately under Catalog #LHB0001. 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

Hu IFN- α

1. **Part #:** LM071 **Description:** Antibody Bead Concentrate (10X) **Lot:** 731604 **Size:** 0.25 mL-100 tests

Bead Region: 17

Form: 0.25 mL 10X bead concentrate 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.

Hu IFN- α

2. **Part #:** BN071 **Description:** Biotinylated Ab Conc. (10X) **Lot:** 731603 **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 Detection Antibody.

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

3. **Part #:** SM311 **Description:** Hu 16-Plex Standard **Lot:** 621958 **Size:** 2 Vials

Form: Lyophilized. The proteins in this standard have been calibrated against the mass of highly purified recombinant protein, with the respective Invitrogen ELISA kit, and NIBSC calibration standard (if available). Refer to the 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.

Concentration of Reconstituted Standards**:

IL-1 β (5,900 pg/mL)	IL-10 (15,400 pg/mL)	IFN- α (7,900 pg/mL)	IL-6 (3,700 pg/mL)
IL-12 (7,900 pg/mL)	IL-13 (8,700 pg/mL)	IL-15 (25,300 pg/mL)	IL-17 (12,000 pg/mL)
GM-CSF (14,600 pg/mL)	IL-5 (3,200 pg/mL)	IFN- γ (13,300 pg/mL)	TNF- α (5,200 pg/mL)
IL-2 (13,600 pg/mL)	IL-7 (10,100 pg/mL)	IL-4 (3,600 pg/mL)	IL-8 (12,400 pg/mL)

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

Reconstitution: Reconstitute with 1 mL Assay Diluent when measuring IFN- α in serum or plasma samples. For other sample types, such as tissue culture supernatants, reconstitute the standard in 1 mL of a solution consisting of 50% Assay Diluent + 50% of sample matrix. Allow standard to rehydrate for approximately 10 minutes before further dilution.

Recommended Starting Concentration for Standard Curve: Upon reconstitution, the starting concentration of standard is the value cited above. Make serial 1:3 dilutions in Assay Diluent (serum/plasma samples) or other appropriate matrix. Use 100 μ L per assay. If establishing a Multiplex Assay, this same standard can be used to measure the other related cytokines cited above in a Multiplex Assay format. Refer to the User Manual included in the Buffer Reagent Kit for further information.

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PILHC4011 (Rev 01/10)

(Page 1 of 2) DCC-10-0198

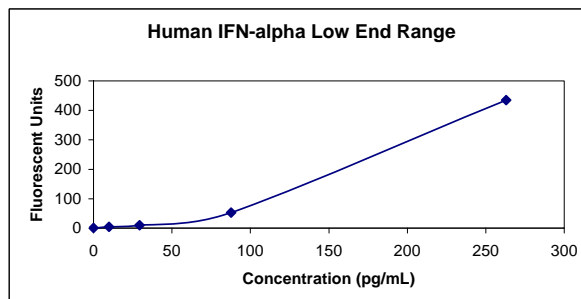
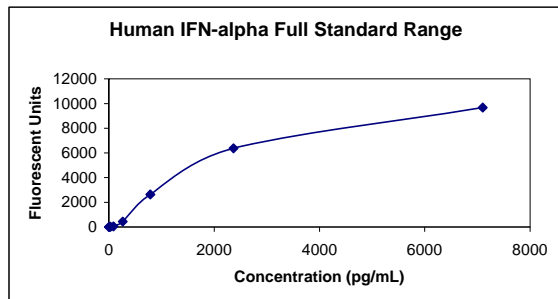
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Performance Characteristics

Analytical Sensitivity: The minimum detectable dose of Human IFN- α is <15 pg/mL. This was determined by adding two standard deviations to the mean FI obtained when the zero standard was assayed 24 times.



Typical Standard Curve

Specificity: Buffered solutions of a panel of substances at 5 or 10 ng/mL were assayed with the Invitrogen Human IFN- α Singleplex Bead Kit. The following substances were tested and all were found to have no cross-reactivity: human IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12, IL-13, IL-15, EGF, Eotaxin, FGFB, G-CSF, GM-CSF, IFN- γ , MCP-1, MIP-1 α , MIP-1 β , RANTES, TNF- α , and VEGF. This Kit will recognize the following human interferon species: IFN- α A, IFN- α 2, IFN- α A/D, IFN- α C, IFN- α D, IFN- α G, IFN- α J, and IFN- α K. The following human interferon species are not recognized by this Kit: IFN- α B2, IFN- α F, IFN- α H, IFN- α I, IFN- β , IFN- γ , and IFN- ω .

Precision:

	Intra-assay (n=24)	Inter-assay (n=46)
Mean (pg/mL)	2045	2089
SD	139	166
%CV	6.8	7.9

Linearity: Tissue culture medium containing 10% fetal calf serum was spiked with human IFN- α and serially diluted in a solution of 50% *Assay Diluent* and 50% tissue culture medium. Linear regression analysis revealed a correlation coefficient of 0.99.

Recovery:

Human serum averaged 93% (range: 71% to 105%).
Human EDTA plasma averaged 98% (range: 95% to 101%).
Human citrate plasma averaged 89% (range: 84% to 94%).
Human heparin plasma averaged 92% (range: 88% to 94%).
Tissue culture medium containing 10% fetal calf serum averaged 99%.

Correlation to ELISA:

A correlation coefficient of 0.94 was calculated when values for tissue culture medium, obtained with the Human IFN- α Singleplex Bead Kit, were compared to the Invitrogen IFN- α ELISA (cat.# KHC4012). Human IFN- α Singleplex Bead Kit (pg/mL) \times 1.5 = Hu IFN- α ELISA (pg/mL). Correlation of results obtained with the Human IFN- α Singleplex Bead Kit to one's own system should be determined to arrive at an appropriate multiplication factor.

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.		

By purchasing this Kit, which contains fluorescently labeled microsphere beads authorized by Luminex® Corporation ("Luminex®"), you, the customer, acquire the right under Luminex's patent rights to use this Kit or any portion of this Kit, including without limitation the microsphere beads contained herein, only with Luminex's laser based fluorescent analytical test instrumentation marketed under the name Luminex® 100™ or 200™. This product is covered by one or more of the following U.S. patents: 6,046,807.

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PILHC4011 (Rev 01/10)

(Page 2 of 2) DCC-10-0198

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