



# Human IL-12 p70 Singleplex Bead Kit

## Technical Data Sheet

Catalog #: LHC9121 Lot #:\* 749532

\*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 IL-12 p70 in serum, 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

1. Part #: LM086 Description: Hu IL-12 p70 Antibody Bead Concentrate (10X) Lot: 783911 Size: 0.25 mL-100 tests

**Bead Region:** 42

**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 - 8°C in the dark, until the expiration date indicated on the kit.

2. Part #: BN086 Description: Hu IL-12 p70 Biotinylated Ab Conc. (10X) Lot: 783910 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 - 8°C until the expiration date indicated on the kit.

3. Part #: SM311 Description: Hu 16-Plex Standard Lot: 778647 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 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 $\beta$ (11,000 pg/mL)	IL-10 (14,500 pg/mL)	IFN- $\alpha$ (4,500 pg/mL)	IL-6 (4,700 pg/mL)
IL-12 (6,700 pg/mL)	IL-13 (28,000 pg/mL)	IL-15 (24,000 pg/mL)	IL-17 (16,000 pg/mL)
GM-CSF (10,000 pg/mL)	IL-5 (4,700 pg/mL)	IFN- $\gamma$ (24,000 pg/mL)	TNF- $\alpha$ (4,000 pg/mL)
IL-2 (8,500 pg/mL)	IL-7 (10,400 pg/mL)	IL-4 (28,000 pg/mL)	IL-8 (5,200 pg/mL)

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

One nanogram of Invitrogen recombinant human IL-12 equals 11 IU of WHO reference preparation 95/544 (NIBSC, Hertfordshire, UK, EN6 3QG).

**Reconstitution:** Reconstitute with 1 mL Assay Diluent when measuring IL-12 p70 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  $\mu$ 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 User Manual included in the Buffer Reagent Kit for further information.

**For Research Use Only. CAUTION: Not for human or animal therapeutic or diagnostic use.**

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PILHC9121 (Rev 06/10)

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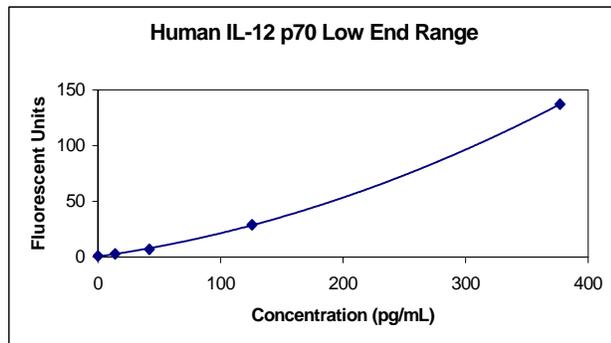
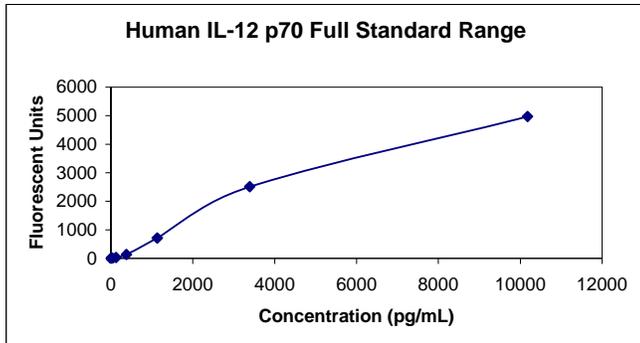
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### Performance Characteristics

**Analytical Sensitivity:** The minimum detectable dose of Hu IL-12 p70 is <10 pg/mL. This was determined by adding two standard deviations to the mean FI obtained when the zero standard was assayed 30 times.



### Typical Standard Curve

**Specificity:** Buffered solutions of a panel of substances at 10 or 50 ng/mL were assayed with the Invitrogen Human IL-12 p70 Singleplex Bead Kit. The following substances were tested and all were found to have no cross-reactivity: human IL-1 $\beta$ , IL-2, IL-3, IL-4, IL-5, IL-6, IL-8, IL-10, IL-13, IL-15, IL-17, G-CSF, GM-CSF, IFN- $\gamma$ , TNF- $\alpha$ , VEGF, FGF basic, HGF, EGF, IP-10, MIG, MCP-1, MIP-1 $\alpha$ , MIP-1 $\beta$ , EOTAXIN, RANTES, IL-12 p40; mouse IL-12; rat IL-12.

### Precision:

	Intra-assay (n=16)	Inter-assay (n=32)
Mean (pg/mL)	880.1	876.3
SD	41.6	35.2
%CV	4.7	4.0

**Linearity:** Human serum and tissue culture medium containing 10% fetal calf serum were spiked with human IL-12 p70 and serially diluted in Assay Diluent and a solution consisting of 50% Assay Diluent and 50% tissue culture medium containing 10% fetal calf serum, respectively, over the range of the assay. Linear regression analysis of samples versus the expected concentration yielded a correlation coefficient of 0.99 for both serum and tissue culture.

### Recovery:

Human serum averaged 118% (range: 105% to 128%).

Human EDTA plasma averaged 100% (range: 78% to 112%).

Human Citrate plasma averaged 89% (range: 77% to 105%).

Human Heparin plasma averaged 104% (range: 96% to 115%).

Tissue culture medium containing 10% fetal calf serum averaged 106.6% (range: 100% to 110.5%).

### 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	🔥	Temperature limitation
🏭	Manufacturer	EC/REP	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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