



Human IL-12 p40/p70 Antibody Bead Kit

INFORMATION SHEET

Catalog #: LHC0121 Description: Human IL-12 p40/p70 Lot:* 412386

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

Intended Use

This reagent set comprises the analyte specific components for the measurement of human IL-12 heterodimer (p70) as well as the free p40 subunit in serum, plasma or tissue culture supernatant. The assay may be run alone or in combination with other Antibody 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. Antibody Bead Concentrate (10x):

Catalog #: LM032 Description: Ms x Hu IL-12 p40/p70 Lot: 423648 Size: 0.25 mL-100 tests

Bead Region: 20

Form: 0.25 mL 10x bead concentrate solution in storage buffer. Contains 7.5 mM sodium azide as preservative.

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

2. Biotinylated Antibody Concentrate (10x):

Catalog #: BN032 Description: Ms x Hu IL-12 p40/p70 biotin Lot: 423649 Size: 1 mL-100 tests

Form: 1 mL of a 10x stock of Biotinylated Antibody Concentrate in Biotin Diluent. Contains 15 mM 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. Hu Cytokine II Standard (2 vials):

Catalog #: SM0073 Description: Rec. Hu Cytokine II Std. Lot: 410097 Size: Single use

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). See the Product Insert included in the Buffer Reagent Kit for further information.

Storage: Store at 2 to 8°C. Use within 1 hour after reconstitution. Discard immediately after use.

Concentration of Reconstituted Standard**:

IL-12 (14,010 pg/mL) IL-13 (10,750 pg/mL) IL-15 (14,600 pg/mL)

IL-17 (14,270 pg/mL) IFN- α (14,960 pg/mL) IL-16 (47,720 pg/mL)

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

One microgram of Invitrogen recombinant human IL-12 equals 10 mIU of WHO reference preparation 95/544 (NIBSC, Hertfordshire, UK, EN6 3QG).

NOTE: Human IL-12 has been recalibrated to NIBSC reference material and the above value for IL-12 reflects this recalibration. Correlation of results using the previous standard (Cat. # SM0073, Lot # R102104) with results obtained with this standard may be obtained by using a conversion factor.

[results obtained with previous standard] x 1.5 = [results obtained with this standard]

Reconstitution: Reconstitute with 1 mL Assay Diluent when measuring IL-12 p40/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.

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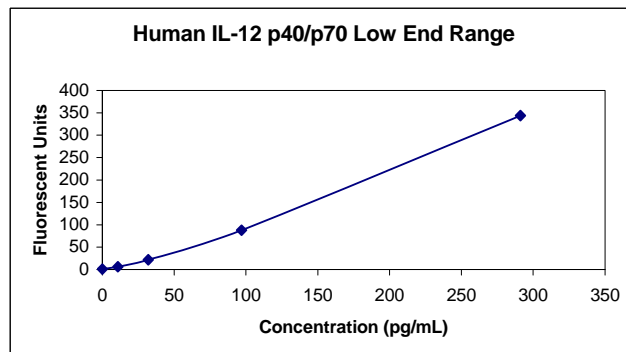
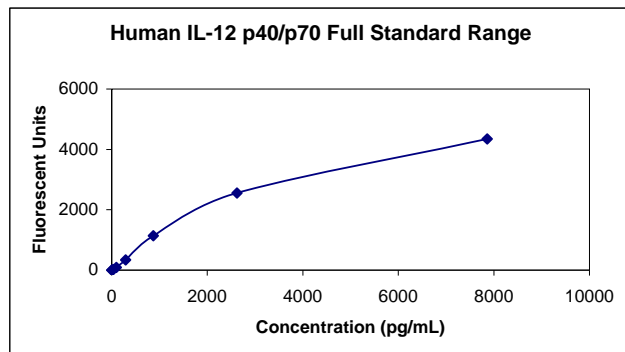
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Recommended Starting Concentration for Standard Curve: Upon reconstitution, the starting concentration of standards is the value cited above. Make serial 1:3 dilutions in Assay Diluent (serum/plasma samples) or other appropriate matrix. Use 100 μ L 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. See the Product Insert included in the Buffer Reagent Kit for further information.

Performance Characteristics

Analytical Sensitivity: The minimum detectable dose of Hu IL-12 p40/p70 is <15 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 Hu IL-12 p40/p70 Antibody Bead Kit. The following substances were tested and all were found to have no cross-reactivity: human IL-1 α , IL-1 β , IL-RA, IL-2, IL-3, IL-5, IL-6, IL-7, IL-8, IL-10, IL-13, IL-15, IL-17, β TG, G-CSF, PDGF, GM-CSF, GRO, IFN- α , IFN- γ , IP-10, LIF, MCP-1, MIP-1 α , MIP-1 β , OSM, RANTES, SCF, TGF- β , TNF- β ; mouse IL-12 p40; mouse IL-12 p70; rat IL-12 p40.

Precision:

	Intra-assay (n=16)	Inter-assay (n=32)
Mean (pg/mL)	461	446
SD	38	36
%CV	8.2	8.1

Linearity: Human serum and tissue culture medium containing 10% fetal calf serum were spiked with human IL-12 p40/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 97% (range: 85% to 114%).
Human plasma (citrate) averaged 104% (range: 100% to 110%); EDTA plasma averaged 101% (range: 90% to 104%);
Heparin plasma averaged 105% (range: 99% to 114%).
Tissue culture medium containing 10% fetal calf serum averaged 100% (range: 95% to 105%).

Correlation to ELISA:

A correlation coefficient of 0.97 was calculated when values for stimulated lymphocytes in RPMI + 10% FCS, obtained with the Hu IL-12 p40/p70 Antibody Bead Kit were compared to the Invitrogen ELISA for Hu IL-12 p40/p70 (cat.# KHC0121, KHC0122). Hu IL-12 p40/p70 Antibody Bead Kit (pg/mL) \times 1.07 = Hu IL-12 p40/p70 ELISA (pg/mL). Correlation of results obtained with the Hu IL-12 p40/p70 Antibody Bead Kit to one's own system should be determined to arrive at an appropriate multiplication factor.

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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