



# Human IL-8 UltraSensitive Antibody Bead Kit

## INFORMATION SHEET

Catalog #: LHC0083 Description: Human IL-8 UltraSensitive Lot:\* 480483

\*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 ultrasensitive measurement of human IL-8 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 #LHB0003. 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 #: LM204 Description: Ms x Hu IL-8 Lot: 480484 Size: 0.25 mL-100 tests

**Bead Region:** 81

**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 #: BN204 Description: Ms x Hu IL-8 biotin Lot: 480501 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 in the dark, until the expiration date indicated on the kit.

#### 3. Human Cytokine Ten-Plex Standard (GM-CSF, IFN- $\gamma$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, and TNF- $\alpha$ ) (2 vials):

Catalog #: SM024 Description: Rec. Hu Cytokine Ten-Plex Std. Lot: 1407255 Size: Single use

**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). 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.

#### Concentrations of Prepared Standard\*\*:

GM-CSF (824 pg/mL)	IFN- $\gamma$ (773 pg/mL)	IL-1 $\beta$ (411 pg/mL)
IL-2 (499 pg/mL)	IL-4 (1,529 pg/mL)	IL-5 (1,374 pg/mL)
IL-6 (614 pg/mL)	IL-8 (709 pg/mL)	IL-10 (495 pg/mL)
TNF- $\alpha$ (553 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 Human Cytokine Ten-Plex Standard. Reconstitute each vial of standard with 1.0 mL Ultrasensitive Standard Reconstitution Buffer. Allow the standard to rehydrate for at least 10 minutes. Gently mix the standard by swirling and pipetting up and down 5-10 times. **This UltraSensitive Assay requires a further 1:20 dilution of the reconstituted standard.** When working with serum or plasma samples, perform this 1:20 dilution in Ultrasensitive Assay Diluent. For other sample types, such as tissue culture supernatants, perform this 1:20 dilution in a solution consisting of 50% Ultrasensitive Assay Diluent + 50% sample matrix. Gently mix the diluted standard by swirling and pipetting up and down 5-10 times.

**Recommended Starting Concentration for Standard Curve:** Upon reconstitution and 1:20 dilution, *the starting concentrations of the standard are the values cited above.* Make serial 1:3 dilutions in Ultrasensitive Assay Diluent (serum or plasma samples) or 50% Ultrasensitive Assay Diluent + 50% sample matrix (other sample types, such as tissue culture supernatants). Use 100  $\mu$ L per assay.

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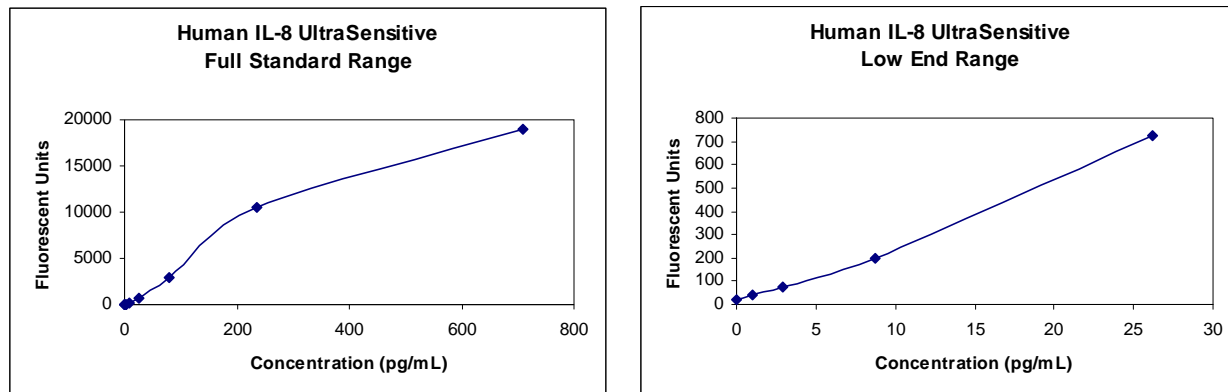
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### Performance Characteristics

**Analytical Sensitivity:** The minimum detectable dose of Hu IL-8 is <1.0 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 with concentrations ranging between 1 and 10 ng/mL were assayed with the Invitrogen Human IL-8 UltraSensitive Antibody Bead Kit. The following substances were tested and all were found to have no cross-reactivity: human IL-1 $\alpha$ , IL-1 $\beta$ , IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-10, IL-11, IL-12, IL-13, IL-15, IL-16, IL-17, GM-CSF, IFN- $\alpha$ , IFN- $\gamma$ , TNF- $\alpha$ , Eotaxin, IP-10, Gro- $\alpha$ , MCP-1, MCP-2, MCP-3, MIG, MIP-1 $\alpha$ , MIP-1 $\beta$ , RANTES, TGF- $\beta$ 1, DR5, IL-1RA, IL-2R, IL-4R, IL-6R, TNF-RI, TNF-RII, EGF, FGF basic, G-CSF, HGF, VEGF, Adiponectin, Insulin, Leptin, SAA, Resistin, Haptoglobin, BDNF, GDNF, and PDGF-BB; mouse IL-1 $\alpha$ , IL-1 $\beta$ , IL-2, IL-4, IL-5, IL-6, IL-10, IL-12p40/p70, IL-13, IL-17, GM-CSF, IFN- $\gamma$ , IP-10, KC, MCP-1, MIG, MIP-1 $\alpha$ , TNF- $\alpha$ , FGF basic, and VEGF; rat IL-1 $\alpha$ , IL-1 $\beta$ , IL-2, IL-4, IL-6, IL-10, IL-12, GM-CSF, IFN- $\gamma$ , and TNF- $\alpha$ .

### Precision:

	Intra-assay (n=16)	Inter-assay (n=32)
Mean (pg/mL)	71.4	74.7
SD	5.6	6.6
%CV	7.85%	8.88%

**Linearity:** Human serum and tissue culture medium containing 10% fetal calf serum were spiked with human IL-8 and serially diluted in Ultrasensitive Assay Diluent and a solution consisting of 50% Ultrasensitive 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 correlation coefficients of 0.97 and 0.99 for serum and tissue culture medium, respectively.

### Recovery:

Human serum averaged 106.3% (range: 82.1-119.0%).

Human EDTA plasma averaged 106.3% (range: 96.4-118.7 %); Citrate plasma averaged 91.6% (range: 84.4-115.5%); Heparin plasma averaged 111.2% (range: 97.2-119.5%).

Tissue culture medium containing 10% fetal calf serum averaged 80.0% (range: 79.1-91.9%).

### Correlation:

A correlation coefficient of 0.91 was calculated when values for tissue culture medium from human PBMCs stimulated for 72 hours with PHA, obtained with the Hu IL-8 UltraSensitive Antibody Bead Kit were compared to the Invitrogen Hu IL-8 ELISA (cat.# KHC0081, KHC0082). Hu IL-8 UltraSensitive Antibody Bead Kit (pg/mL) x 0.47 = Hu IL-8 ELISA (pg/mL).

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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