



# Human EGF Antibody Bead Kit

## INFORMATION SHEET

Catalog #: LHG0061 Description: Human EGF Lot:\* 412132

\*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 EGF in serum, plasma, buffered solution 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 #: LM044 Description: Ms x Hu EGF Lot: 423664 Size: 0.25 mL-100 tests

**Bead Region:** 8

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

2. Biotinylated Antibody Concentrate (10x):

Catalog #: BN044 Description: Rbt x Hu EGF biotin Lot: 423666 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 Growth Factor Standard (VEGF, EGF, FGF-basic, HGF, and G-CSF) (2 vials):

Catalog #: SM009 Description: Rec. Hu Growth Factor Std. Lot: 403272 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 Reconstituted Standards:

EGF (12,810 pg/mL)

FGF-b (5,790 pg/mL)

G-CSF (16,660 pg/mL)

HGF (6,000 pg/mL)

VEGF (11,290 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 EGF 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% 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 µL 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.

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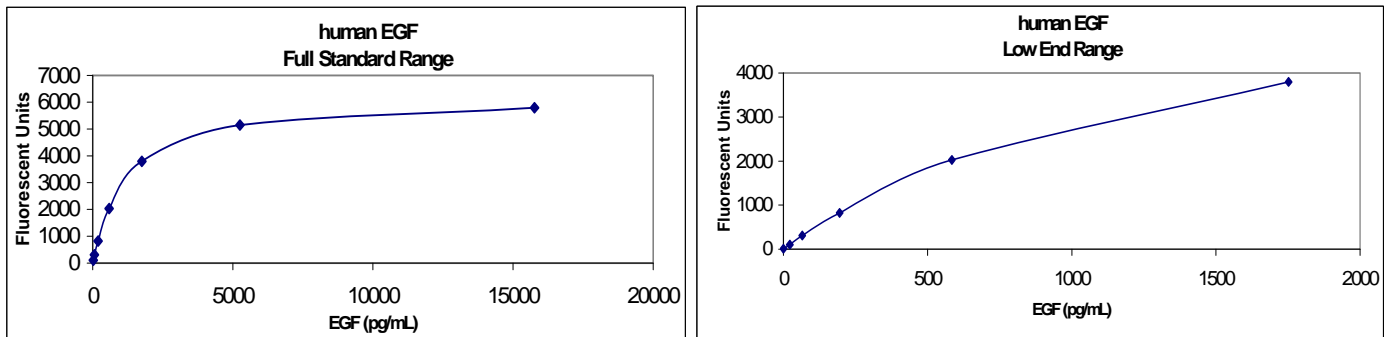
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### Performance Characteristics

**Analytical Sensitivity:** The minimum detectable dose of human EGF 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 Human EGF Antibody Bead Kit. The following substances were tested and all were found to have no cross-reactivity: human IL-4, IL-6, IL-6R, IL-10, IL-12, IL-13, IL-16, Fas/Apo-1/CD95, FGF basic, G-CSF, GM-CSF, IFN- $\gamma$ , MCP-1, RANTES, VCAM-1, TNF- $\alpha$ , VEGF.

### Precision:

	Intra-assay (n=16)	Inter-assay (n=32)
Mean (pg/mL)	938	987
SD	39	72
%CV	4.2	7.3

**Linearity:** Human serum was spiked with human EGF and serially diluted in Assay Diluent over the range of the assay. Linear regression analysis of samples versus the expected concentration yielded a correlation coefficient of 0.99. Tissue culture medium containing 10% fetal calf serum was spiked with human EGF and serially diluted in a solution consisting of 50% Assay Diluent and 50% tissue culture medium. Linear regression analysis of samples versus the expected concentration yielded a correlation coefficient of 0.99.

### Recovery:

Human serum averaged 100% (range: 92% to 107%).

Human plasma (citrate) averaged 109% (range: 90% to 126%); EDTA plasma averaged 105% (range: 95% to 116%); heparin plasma averaged 83% (range: 80% to 86%).

Tissue culture medium containing 10% fetal calf serum averaged 103% (range: 100% to 114%).

**Correlation to ELISA:** A correlation coefficient of 0.98 was calculated when values for tissue culture samples obtained with the Human EGF Antibody Bead Kit were compared to the Invitrogen ELISA for Human EGF (cat. # KHG0061, KHG0062). Human EGF Antibody Bead Kit  $\times$  1.04 = Human EGF ELISA. Correlation of results obtained with the Human EGF 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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