Human MCP-1 Singleplex Bead Kit

Technical Data Sheet

Catalog #: LHC1011 **Lot #:*** 1394620

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

Product Use

This kit is comprised of components for the measurement of human MCP-1 in serum, plasma or tissue culture supernatant. The assay may be run alone or in combination with other singleplex bead kits from Life Technologies™. Buffer reagents needed to complete the reaction are sold separately under Catalog #LHB0001. These reagents are intended for use in the **Luminex® 100™/200™ and the FLEXMAP 3D® System**. **This kit is configured for research use only and is not to be used in diagnostic procedures.**

Reagents Provided

Hu MCP-1

1. **Part #:** LM038 **Description:** Antibody Bead Concentrate (10X) **Lot:** 1394622 **Size:** 0.25 mL-100 tests

Bead Region: 29
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 MCP-1

2. **Part #:** BN038 **Description:** Biotinylated Ab Conc. (10X) **Lot:** 1394621 **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 #:** SM310 **Description:** Hu 14-Plex Standard **Lot:** 1045799 **Size:** 2 Vials

Form: Lyophilized. The proteins in this standard have been calibrated against the masses of highly purified recombinant proteins, with the respective Life Technologies™ ELISA kits, and NIBSC calibration standards (if available). 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.
Concentrations of Reconstituted Standard:**

VEGF (7,600 pg/mL)	G-CSF (58,730 pg/mL)	EGF (7,290 pg/mL)	HGF (14,930 pg/mL)
FGF basic (3,450 pg/mL)	RANTES (11,820 pg/mL)	Eotaxin (3,610 pg/mL)	MIP-1α (18,300 pg/mL)
MIP-1β (8,260 pg/mL)	MCP-1 (14,800 pg/mL)	IL-1RA (33,700 pg/mL)	IP-10 (4,120 pg/mL)
IL-2R (22,900 pg/mL)	MIG (4,300 pg/mL)		

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

One nanogram of Life Technologies™ recombinant human MCP-1 equals 1.5 International Units of WHO reference preparation 92/794 (NIBSC, Hertfordshire, UK, EN6 3QG).

Reconstituton: Reconstitute with 1 mL Assay Diluent when measuring MCP-1 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 Multiplex Assay format. Refer to the user manual included in the buffer reagent kit for further information.

Explanation of symbols

Symbol	Description	Symbol	Description	Symbol	Description
	Manufacturer	REF	Catalog number	LOT	Batch code
	Use by		Temperature limitation		
	Consult instructions for use		Caution, consult accompanying documents		

For Research Use Only. Not for use in diagnostic procedures.

www.lifetechnologies.com

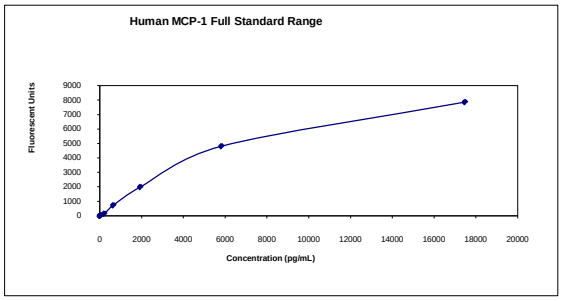
Life Technologies Corporation • 7335 Executive Way, Frederick, MD 21704 • Tel: 800.955.6288 • E-mail: techsupport@lifetech.com

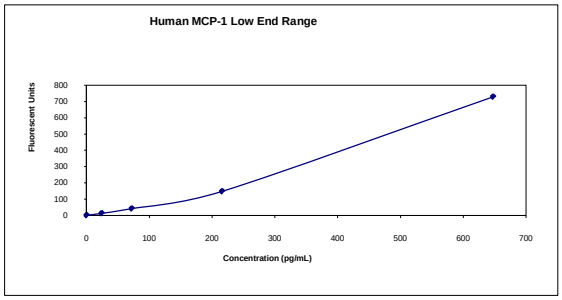
Human MCP-1 Singleplex Bead Kit

Technical Data Sheet

Performance Characteristics

Analytical Sensitivity: The minimum detectable dose of Hu MCP-1 is < 5 pg/mL. This was determined by adding two standard deviations to the mean FI obtained when the zero standard was assayed 16 times.





Typical Standard Curve

Specificity: Buffered solutions of a panel of substances at 10 or 50 ng/mL were assayed with the Life Technologies™ Hu MCP-1 Singleplex Bead Kit. The following substances were tested and all were found to have no cross-reactivity: human IL-1α, IL-1β, IL-1RA, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-10, IL-12, IL-13, IL-15, IL-16, βTG, G-CSF, PDGF, GM-CSF, GRO, IFN-α, IFN-γ, IP-10, LIF, Eotaxin, MCP-3, MCP-4, MIP-1α, MIP-1β, OSM, RANTES, SCF, TGF-β, TNF-β; rat MCP-1; mouse MCP-1.

Precision:

	Intra-assay (n=16)	Inter-assay (n=36)
Mean (pg/mL)	1930	1960
SD	111	113
%CV	5.8	5.8

Linearity: Human serum was spiked with human MCP-1 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 0.97. Tissue Culture medium containing 10% fetal calf serum was spiked with human MCP-1 and serially diluted in a solution of 50% Assay Diluent and 50% tissue culture medium. Linear regression analysis yielded a correlation coefficient of 0.99.

Recovery:

Sample type	Results
Serum (Human)	✓
EDTA plasma (Human)	✓
Citrate plasma (Human)	✓
Heparin plasma (Human)	✓
Tissue culture medium with 10% fetal calf serum*	✓

Notes: 70-130% recovery (✓), 50-69% recovery (−), 131 -150% recovery (+) and <50% or >150% recovery (NR - Not recommended) *Analysis performed during product development and with first lots produced.

Correlation to ELISA:

A correlation coefficient of 0.97 was calculated when values for human serum and plasma, obtained with the Hu MCP-1 Singleplex Bead Kit, were compared to the Life Technologies™ ELISA for Human MCP-1 (cat.# KHC1011, KHC1012). Hu MCP-1 Singleplex Bead Kit (pg/mL) x 0.65 = Hu MCP-1 ELISA (pg/mL). Correlation of results obtained with the Hu MCP-1 Singleplex Bead Kit to one's own system should be determined to arrive at an appropriate multiplication factor.

For Research Use Only. Not for use in diagnostic procedures.