

Technical Data Sheet

Human Th1/Th2 Cytokine Lyophilized Standard

Product Information

Material Number:	551810
Size:	1 Vial(s)
Storage Buffer:	Lyophilized in an aqueous buffered solution containing BSA and ProClin™ 150.

Description

The Human Th1/Th2 Cytokine Standard contains a mixture of individually lyophilized recombinant proteins made up of human Interleukin (IL)-2, IL-4, IL-5, IL-6, IL-10, Tumor Necrosis Factor (TNF), and Interferon- γ (IFN- γ). The reconstituted Human Th1/Th2 Cytokine Standard is designed for use as a standard control with the BD™ Cytometric Bead Array (CBA) Human Th1/Th2 Cytokine Kit (Cat. No. 550749 or 551809) and the BD™ Cytometric Bead Array (CBA) Non-Human Primate Th1/Th2 Cytokine Kit (Cat. No. 557800). Please refer to the manual included with these kits for further information.

Preparation and Storage

Store the lyophilized standard at 4°C prior to reconstitution.

Lyospheres from 1 vial of the Human Th1/Th2 Cytokine Standard, when reconstituted in 2.0 mL Assay Diluent, approximates the CBA activity of human IL-2, IL-4, IL-5, IL-6, IL-10, TNF, and IFN- γ at a concentration of 5000 pg/mL. Following reconstitution, maintain the Human Th1/Th2 Cytokine Standard at 4°C and use within 12 hours. Any unused reconstituted standard must be discarded after this period (do not store or reuse).

Application Notes

Application

Flow cytometry	Routinely Tested
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Recommended Assay Procedure:

The Human Th1/Th2 Cytokine Standard has been tested with either the BD™ Cytometric Bead Array (CBA) Human Th1/Th2 Cytokine Kit (Cat. No. 550749), the BD™ CBA Human Th1/Th2 Cytokine Kit II (Cat. No. 551809) or the BD™ CBA Non-Human Primate Th1/Th2 Cytokine Kit (Cat. No. 557800) to assure to function as a standard in the CBA assay. Investigators are encouraged to refer to these CBA kit manuals or to the abbreviated instruction below (Preparation of Human Th1/Th2 Cytokine Standard Protocol). The Human Th1/Th2 Cytokine Standard should be reconstituted using Assay Diluent supplied with the aforementioned CBA kits (component no. 51-2432KC) or it may be purchased separately (Cat. No. 560104).

Preparation of Human Th1/Th2 Cytokine Standard: The Human Th1/Th2 Cytokine Standard is lyophilized and should be reconstituted and serially diluted before mixing with CBA capture beads and PE detection reagents.

1. Open one vial of the lyophilized Human Th1/Th2 Cytokine Standard. Transfer all the lyospheres to a polypropylene tube (BD Falcon™, Cat. No. 352097). Label the tube "Top Standard".
2. Reconstitute the standard with 2.0 mL of Assay Diluent. Allow the reconstituted standard to equilibrate for at least 15 minutes before making dilutions. **Mix the reconstituted protein by pipette only. Do not vortex or mix vigorously.**
3. Label additional 12 x 75 mm tubes (BD Falcon™, Cat. No. 352008) and arrange them in the following order: Top Standard, 1:2, 1:4, 1:8, 1:16, 1:32, 1:64, 1:128, and 1:256.
4. Add 300 μ l of Assay Diluent to each of the dilution tubes.
5. Perform a serial dilution by transferring 300 μ l from the Top Standard to the 1:2 dilution tube and mix thoroughly. **Do not vortex, mix by pipet only.** Continue making serial dilutions by transferring 300 μ l from the 1:2 tube to the 1:4 tube and so on to the 1:256 tube and mix thoroughly. Prepare one tube containing only Assay Diluent to serve as the 0 pg/mL negative control.

Suggested Companion Products

Catalog Number	Name	Size	Clone
550749	Human Th1/Th2 Cytokine Cytometric Bead Array (CBA) Kit	100 Tests	(none)
551809	Human Th1/Th2 Cytokine Cytometric Bead Array (CBA) Kit II	100 Tests	(none)
557800	Cytometric Bead Array NHP Th1/Th2 Cytokine Kit	80 Tests	(none)
560104	Assay Diluent	30 mL	(none)
352097	BD Falcon™ Conical Centrifuge Tubes, 15 ML		(none)
352008	BD Falcon™ Round Bottom Tubes, 6 ML		(none)

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Product Notices

1. ProClin is a trademark of Rohm and Haas Company.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
4. This product is manufactured and sold under license from Pestka Biomedical Laboratories, Inc. (d/b/a PBL InterferonSource) and may be used solely as indicated. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics is strictly prohibited. This product is covered by U.S. Patent No. 5,597,901 and Bulgarian Patent No. BG1895.
5. Warning: CBA lyophilized standard contains 0.02% (w/w) of a CMIT/MIT mixture (3:1), which is a mixture of:
5-chloro-2-methyl-4-isothiazolin-3-one [EC No 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC No 220-239-6] (3:1).

Hazard statement: May cause an allergic skin reaction.

Precautionary statements: Wear protective gloves/eye protection. Wear protective clothing. Avoid breathing mist/vapours/spray. If skin irritation or rash occurs: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. Dispose of contents/container in accordance with local/regional/national/international regulations.

References

Cook EB, Stahl JL, Lowe L, et al. Simultaneous measurement of six cytokines in a single sample of human tears using microparticle-based flow cytometry: allergics vs. non-allergics. *J Immunol Methods*. 2001; 254(1-2):109-118. (Biology)

Dotti G, Savoldo B, Takahashi S, et al. Adenovector-induced expression of human-CD40-ligand (hCD40L) by multiple myeloma cells. A model for immunotherapy. *Exp Hematol*. 2001; 29(8):952-961. (Biology)

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