SPECIFICITY

The CD4 antigen is a single-chain transmembrane glycoprotein with a 59 kDa molecular weight, which binds to a non polymorphic region of MHC class II molecules. CD4 is a co-receptor in MHC class II restricted antigen-induced activation. CD4 is expressed on a specific subset of peripheral blood lymphocytes, the so-called T "helper" lymphocytes (1). It is present on most thymocytes where it is frequently co-expressed with CD8 (2). CD4 is also expressed on all the monocytes, although with a lower density than on CD4+ T lymphocytes. CD4+ T lymphocytes are active in inducing and helping the synthesis of immunoglobulins by B cell (3).

CD4 is a receptor for the Human Immunodeficiency Virus type I (HIV-1) envelope protein gp120. 13B8.2 monoclonal antibody (mAb) antagonizes HIV effects in vitro. It recognizes an epitope close to the amino-acid residues 88-89 of the CD4 molecule. This recognized epitope is different from those recognized by BL4 monoclonal antibody. 13B8.2 and BL4 are not cross-blocking (4).

The 13B8.2 mAb has been assigned to the CD4 cluster of differentiation at the third International Workshop on Human Leucocyte Differentiation Antigens in Oxford, England, in 1986 (5).

APPLICATION

Studies of CD4 positive cells by flow cytometry.

STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use antibody beyond the expiration date on the label.
4. Avoid microbial contamination of reagents or incorrect results might occur.
5. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This freeze-dried form may be stored at 2 – 8°C until the expiration date stated on the vial label.

No preservative has been added.

REAGENT PREPARATION

Depending of usage, reconstitute with 1 mL of distilled water, with or without 0.1% sodium azide (w/v). The reconstituted form including 0.1% sodium azide may be stored for up to one month at 2 – 8°C. The reconstituted form without sodium azide can be stored at –20°C or less, until the expiration date stated on the vial label. In this case, aliquotting is recommended to avoid multiple freezing / thawing cycles.

CONJUGATION

The purified Ig is conjugated to biotin. Revelation procedure requires streptavidin conjugated with a probe as an additional step after binding of the primary antibody.

PROCEDURE

For each application, it is recommended to establish the right range of antibody dilutions to be used for the experiment.

SELECTED RESEARCH REFERENCES


PRODUCT AVAILABILITY

Monoclonal Antibody CD4-Biotin PN IM0704 – Freeze-dried – 0.2 mg
For additional information in the USA, call 800-526-7694.
Outside the USA, contact your local Beckman Coulter representative.
www.beckmancoulter.com

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