Monoclonal Antibodies Detecting Human Antigens

CD26 (L272)

Form	Catalog number
FITC	340426
PE	340423

Product availability varies by region. Contact BD Biosciences Customer Support or your local sales representative for information.

RESEARCH APPLICATIONS

Research applications include:

- Phenotypic analysis of human immunodeficiency virus (HIV)-infected samples[1-3]
- Studies of leukemias, systemic lupus[4-6]
- Investigation of the proliferation and activation of T lymphocytes[4,7,8,9]
- Studies of recall antigens and $CD4^+$ T-lymphocyte T_{H1} response[8]

DESCRIPTION

Specificity

The CD26 antibody recognizes a 120-kilodalton (kDa) antigen that is identical to the enzyme dipeptidyl peptidase (DPP), a serine protease.[4] It is associated with the binding of the TAT transactivating protein of the HIV.[5] CD26 and CD45 acts in a co-stimulatory fashion on T lymphocytes.[7]

Antigen distribution

Present on peripheral blood T lymphocytes, the CD26 antigen is upregulated on PHA and Con A–stimulated peripheral blood mononuclear cells (PBMCs).[4] The CD26 antigen is found on approximately 50% of CD4 and approximately 30% of CD8 cells.[8] It is also found on EBV transformed B-cell lines, hairy cell leukemia, and macrophages.[4] Absolute numbers of $CD4^+CD26^+$ and $CD8^+CD26^+$ cells are reported to be lower in HIV-positive individuals.[1,2] The $CD26^-CD4^+$ cell appears to be a reservoir for HIV.[1] CD26 bright CD4 lymphocytes are $CD25^+$ and $CD45RO^+$ memory T lymphocytes.[1-3]

Clone

The CD26 antibody, clone L272*, is derived from hybridization of Sp2/0 mouse cells with spleen cells from BALB/c mice immunized with E1αPGF/JY cells.

Composition

The CD26 antibody is composed of mouse IgG_{2a} heavy chains and kappa light chains.

Product configuration

The following is supplied in phosphate buffered saline (PBS) containing a stabilizer and a preservative.

Form	Number of tests	Volume per test (µL)[a]	Amount provided (µg)	Total volume (mL)	Concentration (µg/mL)	Stabilizer	Preservative
FITC	50	20	50	1.0	50	Gelatin	0.1% Sodium azide
PE	50	20	50	1.0	50	Gelatin	0.1% Sodium azide

a. Volume required to stain 10^6 cells.

* This clone has not been submitted to any previous Workshop on Human Leukocyte Differentiation Antigens.

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PROCEDURE

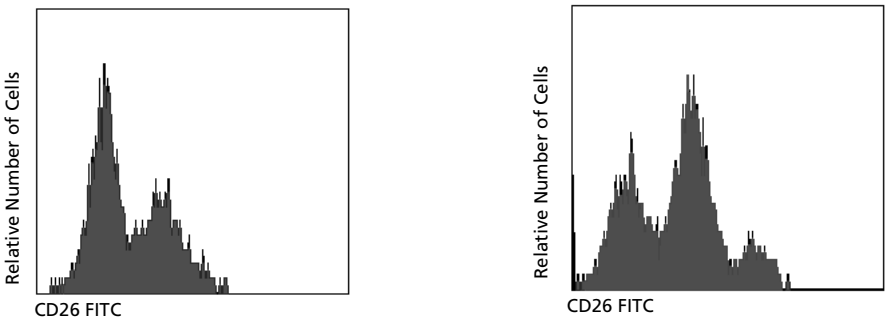
Visit our website (bdbiosciences.com) or contact your local BD representative for the lyse/wash protocol for direct immunofluorescence.

Add 20 µL of reagent to 100 µL of whole blood in a staining tube. Mix thoroughly and incubate for 15 to 30 minutes in the dark at room temperature (20°C–25°C). Add 2 mL of 1X BD FACS™ lysing solution (Cat. No. 349202) at room temperature and vortex tube thoroughly. Incubate for no more than 10 to 12 minutes at room temperature in the dark. Wash cells with 1X PBS with 0.1% sodium azide, add 0.5 mL of 1% paraformaldehyde, mix thoroughly, and analyze. If samples will not be analyzed immediately, mix thoroughly just prior to analysis. Refer to the *BD FACS Lysing Solution* package insert.

REPRESENTATIVE DATA

Flow cytometric analysis was performed on peripheral blood with scatter gates set on the lymphocyte fraction. Laser excitation was at 488 nm. Representative data analyzed with a BD FACS™ brand flow cytometer is shown in the following figure.

Figure 1 Single-parameter displays of peripheral blood lymphocytes analyzed with a BD FACScan™ flow cytometer (logarithmic fluorescence intensity)



NOTE Some samples may show a second, brighter population, as displayed in the figure on the right.

HANDLING AND STORAGE

Store vials at 2°C–8°C. Conjugated forms should not be frozen. Protect from exposure to light. Each reagent is stable until the expiration date shown on the bottle label when stored as directed.

WARNING

All biological specimens and materials coming in contact with them are considered biohazards. Handle as if capable of transmitting infection[10,11] and dispose of with proper precautions in accordance with federal, state, and local regulations. Never pipette by mouth. Wear suitable protective clothing, eyewear, and gloves.

CHARACTERIZATION

To ensure consistently high-quality reagents, each lot of antibody is tested for conformance with characteristics of a standard reagent. Representative flow cytometric data is included in this data sheet.

WARRANTY

Unless otherwise indicated in any applicable BD general conditions of sale for non-US customers, the following warranty applies to the purchase of these products.

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REFERENCES

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PATENTS AND TRADEMARKS