

# Monoclonal Antibodies Detecting Human Antigens

## CD10 (HI10a)

| Form     | Catalog number |
|----------|----------------|
| FITC     | 340925         |
| PE       | 340921         |
| PE-Cy7   | 341092         |
| APC      | 340923         |
| APC-H7   | 655404         |
| APC-R700 | 659120         |

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

### RESEARCH APPLICATIONS

Research applications include:

- Characterization of non-T (common) acute lymphoblastic leukemias<sup>1,2</sup>
- Analysis of early stages of hematopoietic differentiation<sup>3-5</sup>
- Analysis of neutrophil chemotaxis<sup>6-8</sup>

### DESCRIPTION

#### Specificity

The CD10 antibody recognizes a 100-kilodalton (kDa) type II transmembrane, glycosylated, zinc-containing metalloprotease.<sup>9,10</sup> The CD10 antigen is also known as common acute lymphoblastic leukemia antigen (CALLA), neutral endopeptidase (NEP), gp100, and enkephalinase.<sup>11</sup>

#### Antigen distribution

The CD10 antigen is found on lymphocytes from samples with acute B-lymphoid leukemia.<sup>12</sup> The CD10 antigen is also present on a wide variety of normal and neoplastic cell types including renal epithelium, fibroblasts, granulocytes, germinal center B lymphocytes,<sup>13</sup> neutrophils,<sup>6,7,14</sup> some T-cell leukemias,<sup>15</sup> and some lymphoma, melanoma, and glioma cell lines.<sup>11</sup>

The CD10 antigen cleaves a number of biologically active peptides,<sup>16</sup> including fMLP, and may modulate the chemotactic activity of fMLP towards neutrophils.<sup>8</sup> Inhibition of the CD10 antigen promotes B-cell maturation,<sup>17</sup> suggesting that it plays a role in B-cell development.

#### Clone

The CD10 antibody, clone HI10a,<sup>10</sup> is derived from the hybridization of P3-63-Ag8.653 mouse myeloma cells with spleen cells isolated from BALB/c mice immunized with blasts from a patient with acute CALLA leukemia.

#### Composition

The CD10 antibody is composed of mouse IgG<sub>1</sub> heavy chains and kappa light chains.

#### Product configuration

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

| Form                  | Number of tests | Volume per test (μL) <sup>a</sup> | Amount provided (μg) | Total volume (mL) | Concentration (μg/mL) | Stabilizer | Preservative      |
|-----------------------|-----------------|-----------------------------------|----------------------|-------------------|-----------------------|------------|-------------------|
| FITC                  | 50              | 20                                | 12.5                 | 1                 | 12.5                  | Gelatin    | 0.1% Sodium azide |
| PE                    | 50              | 20                                | 6                    | 1                 | 6                     | Gelatin    | 0.1% Sodium azide |
| PE-Cy <sup>TM</sup> 7 | 100             | 5                                 | 12.5                 | 0.5               | 25                    | Gelatin    | 0.1% Sodium azide |
| APC                   | 100             | 5                                 | 12.5                 | 0.5               | 25                    | Gelatin    | 0.1% Sodium azide |

**For Research Use Only. Not for use in diagnostic or therapeutic procedures.**

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|-----------------------|-----------------|-----------------------------------|----------------------|-------------------|-----------------------|------------|--------------|
| APC-H7                | 100             | 5                                 | 2.5                  | 0.5               | 50                    | BSA        | ProClin® 300 |
| APC-R700 <sup>b</sup> | 100             | 5                                 | 6.25                 | 0.5               | 12.5                  | BSA        | ProClin 300  |

a. Volume required to stain  $10^6$  cells.

b. BD Horizon™ APC-R700

**CAUTION** Some PE-Cy7, APC-H7, and APC-R700 conjugates show changes in their emission spectra with prolonged exposure to paraformaldehyde or light. For overnight storage of stained cells, wash and resuspend in buffer without paraformaldehyde after 1 hour of fixation.

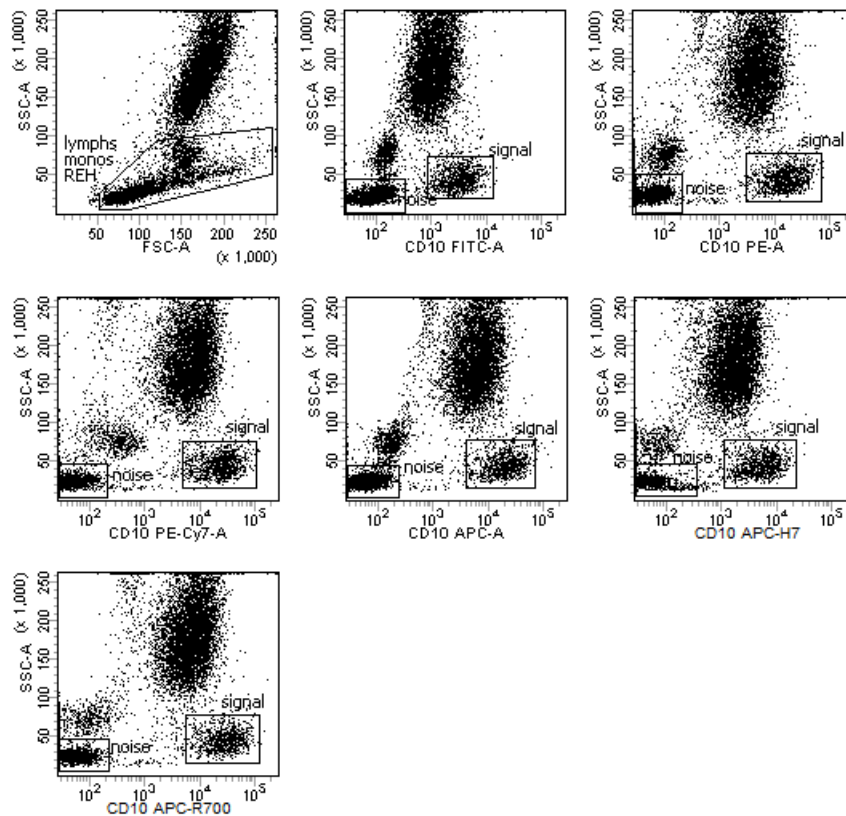
## PROCEDURE

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

## REPRESENTATIVE DATA

Flow cytometric analysis was performed on  $10^6$  REH cells added per mL of whole blood stained with the indicated conjugated antibody and gated on lymphocytes, monocytes, and REH cells. Laser excitation was at 488 nm, 635 nm, or 640 nm.

The APC-R700 conjugate is read off the red laser (640 nm) using a 685 longpass mirror with a 712/21 bandpass filter. Representative data analyzed with a BD FACST™ brand flow cytometer is shown in the following plots.



## 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<sup>18,19</sup> and dispose of with proper precautions in accordance with federal, state, and local regulations. Never pipette by mouth. Wear suitable protective clothing and gloves.

Some reagents are bottled with ProClin 300, and contain 0.003% of a mixture of CMIT/MIT (3:1), CAS number 55965-84-9.



### Warning

H317 May cause an allergic skin reaction.

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.

## 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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