

# CD4 (SK3)

## FORMS

Form	Catalog number	Form	Catalog number	Form	Catalog number
Pure	340853	PE-Cy7	348799	V500-C	647456
Biotin	340854	APC	340672	V450	651850
PE	340670	APC-Cy7	341105	BV421	659476
PerCP	340671	APC-H7	641407	BV510	659454
PerCP-Cy5.5	341653	AmCyan	339198	BV605	663188

## DESCRIPTION

### Specificity

The CD4 antibody<sup>1,2</sup> recognizes a 55-kilodalton (kDa)<sup>3</sup> glycoprotein that is present on T-helper/inducer lymphocytes and monocytes.<sup>4,5</sup>

### Antigen distribution

The CD4 antigen is present on the helper/inducer T-lymphocyte subset, such as CD3<sup>+</sup>CD4<sup>+</sup>, that comprises 28% to 58%<sup>6</sup> of normal peripheral blood lymphocytes.<sup>3,5</sup> It is also present on 80% to 95% of normal thymocytes.<sup>3,5</sup> The CD4 antigen is present in low density on the cell surface of monocytes and in the cytoplasm of monocytes and macrophages (CD3<sup>-</sup>CD4<sup>+</sup>).<sup>7</sup>

### Clone

The CD4 antibody, clone SK3,<sup>1</sup> is derived from the hybridization of NS-1 mouse myeloma cells with spleen cells isolated from BALB/c mice immunized with human peripheral blood T lymphocytes.

### Composition

The CD4 antibody is composed of mouse IgG<sub>1</sub> heavy chains and kappa light chains.

### Product configuration

The following are supplied in buffer 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
Pure	200	20	100	4	25	Gelatin	0.1% Sodium azide
Biotin	100	20	6	2	3	Gelatin	0.1% Sodium azide
PE	100	20	6.2	2	3.1	Gelatin	0.1% Sodium azide
PerCP	100	20	6.4	2	3.2	Gelatin	0.1% Sodium azide
PerCP-Cy <sup>TM</sup> 5.5	50	20	1.5	1	1.5	Gelatin	0.1% Sodium azide
PE-Cy <sup>TM</sup> 7	100	5	6	0.5	12	Gelatin	0.1% Sodium azide
APC	100	5	3	0.5	6	Gelatin	0.1% Sodium azide
APC-Cy7	100	5	6	0.5	12	Gelatin	0.1% Sodium azide
APC-H7	100	5	6	0.5	12	Gelatin	0.1% Sodium azide

**Analyte Specific Reagent. Analytical and performance characteristics are not established.**

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6/2018

23-3654-13

Document: 23-3654-13  
 Valid From: 23-Aug-2018 To: 31-Dec-9999  
 Print Date: 11-Oct-2018 01:50:05 GMT Daylight Time

Doc Type: ZMG  
 Doc Part: EN  
 Usage: Production Usage

Status: Released EFFECTIVE  
 Revision: 01 Change #: 500000132235  
 Version: A Classification: Confidential

Form	Number of tests	Volume per test (µL) <sup>a</sup>	Amount provided (µg)	Total volume (mL)	Concentration (µg/mL)	Stabilizer	Preservative
AmCyan	100	5	3	0.5	6	BSA	0.1% Sodium azide
V500-C <sup>b</sup>	100	5	3	0.5	6	BSA	ProClin™ 950
V450 <sup>b</sup>	100	5	6.5	0.5	13	Gelatin	0.1% Sodium azide
BV421 <sup>b</sup>	100	5	3.15	0.5	6.3	BSA	ProClin 950
BV510 <sup>b</sup>	100	5	3.15	0.5	6.3	BSA	ProClin 950
BV605 <sup>b</sup>	100	5	6.3	0.5	12.6	BSA	0.09% Sodium azide

a. Volume required to stain 10<sup>6</sup> cells.

b. BD Horizon™ V500-C, BD Horizon™ V450, BD Horizon Brilliant™ Violet 421, BD Horizon Brilliant™ Violet 510, BD Horizon Brilliant™ Violet 605

**CAUTION** Some APC-Cy7 conjugates, and to a lesser extent PE-Cy7 and APC-H7 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.

**CAUTION** Prolonged exposure of cells to paraformaldehyde can lead to increased autofluorescence in the violet channels. For overnight storage of stained cells, wash and resuspend in buffer without paraformaldehyde after 1 hour of fixation.

**CAUTION** For optimal results, use BD Horizon™ Brilliant Stain Buffer any time two or more BD Horizon Brilliant™ dyes are used in the same multicolor staining cocktail.

#### Purity

Pure, Biotin: ≥85% pure at bottling, as measured by polyacrylamide gel electrophoresis (PAGE)

PE, PerCP, PerCP-Cy5.5, PE-Cy7, APC, APC-Cy7, AmCyan, APC-H7, V500-C, V450: ≤20% free fluorophore at bottling, as measured by size-exclusion chromatography (SEC)

BV421, BV510, BV605: ≤25% free fluorophore, as measured by ion-exchange chromatography (IEC)

#### 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>8,9</sup> 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.

Visit [regdocs.bd.com](http://regdocs.bd.com) to download the Safety Data Sheet.

#### CHARACTERIZATION

To ensure consistently high-quality reagents, each lot of antibody is tested for conformance with characteristics of a standard reagent.

## 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

BV421, BV510, and BV605 are covered by one or more of the following US patents: 8,158,444; 8,362,193; 8,575,303; 8,354,239; 8,110,673; 8,227,187; or 8,455,613.

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