Technical Data Sheet

APC-H7 Rat anti-Mouse CD4

Product Information

Material Number:	560246	
Alternate Name:	L3T4	
Size:	25 μg	
Concentration:	0.2 mg/ml	
Clone:	GK1.5	
Immunogen:	Mouse CTL clone V4	
Isotype:	Rat (LEW) IgG2b, κ	
Reactivity:	QC Tested: Mouse	
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.	

Description

The GK1.5 clone has been reported to react with the CD4 (L3T4) differentiation antigen expressed on most thymocytes, a subpopulation of mature T lymphocytes (i.e., MHC class II-restricted T cells, including most T helper cells), and a subset of NK-T cells. In addition, CD4 has also been reported to be detectable on pluripotent hematopoietic stem cells, bone marrow myeliod and B-lymphocyte precursors, intrathymic lymphoid precursors, and a subset of splenic dendritic cells. CD4 has also been reported to be expressed on the plasma membrane of mouse egg cells and is involved in adhesion of the egg to MHC class II-bearing sperm. CD4 is an antigen coreceptor on the T-cell surface which interacts with MHC class II molecules on antigen-presenting cells. It participates in T-cell activation through its association with the T-cell receptor complex and protein tyrosine kinase lck. GK1.5 mAb reportedly blocks binding of the RM4-5 (Cat. No. 553046/553047) and H129.19 (Cat. No. 553650/553651), but not RM4-4 (Cat. No. 553055) antibodies.



Two-color analysis of CD4 expression on T lymphocytes. BALB/c splenocytes were simultaneously stained with PE-conjugated 1445-2C11 mAb (anti-mouse CD3e, Cat. No. 553063/553064, both panels), and APC-H7 conjugated rat anti-mouse CD4 clone GK1.5 mAb (right panel) or APC-H7 Rat IgG2b isotype control (Cat. no. 560200, left panel). Flow cytometry was performed on a BD™ LSR II flow cytometry system and the dot plots were derived from the gated events based on light scattering characteristics of viable splenocytes.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated with APC-H7 under optimum conditions, and unconjugated antibody and APC-H7 were removed. Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

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Suggested Companion Products

Catalog Number	Name	Size	<u>Clone</u>
560200	APC-H7 Rat IgG2b, κ Isotype Control	0.1 mg	A95-1
553063	PE Hamster Anti-Mouse CD3e	0.1 mg	145-2C11

Product Notices

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 3. BD APC-H7 is a tandem conjugate and an analog of APC-Cy7 with the same spectral properties. It has decreased intensity but it is engineered for greater stability and less spillover in the APC channel and consequently offers better performance than APC-Cy7. It has an absorption maximum of approximately 650 nm. When excited by light from a red laser, the APC fluorochrome can transfer energy to the cyanine dye, which then emits at a longer wavelength. The resulting fluorescent emission maximum is approximately 767 nm. BD recommends that a 750-nm longpass filter be used along with a red-sensitive detector such as the Hamamatsu R3896 PMT. As with APC-Cy7 special filters are required when using APC-H7 in conjunction with APC.

Note: Although our APC-H7 products demonstrate higher lot-to lot consistency than other APC tandem conjugate products, and every effort is made to minimize the lot-to-lot variation in residual emission from APC, it is strongly recommended that every lot be tested for differences in the amount of compensation required and that individual compensation controls are run for each APC-H7 conjugate. Note: Cy is a trademark of Amersham Biosciences Limited.

- 4. Although BD APC-H7 is engineered to minimize spillover to the APC channel and is more stable and less affected by light, temperature, and formaldehyde-based fixatives, compared to other APC-cyanine tandem dyes, it is still good practice to minimize as much as possible, any light, temperature and fixative exposure when working with all fluorescent conjugates.
- 5. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
- 6. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

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