invitrogen™ | MOLECULAR PROBES®

PRODUCT INSERT

MONOCLONAL ANTIBODY TO THE MOUSE CD81 (TAPA-1) ANTIGEN

Product	Form	Volume	Antibody*	Excitation (nm)	Peak Emission (nm)	Matching Isotype Controls	
HMCD8101	FITC	1.0 ml	500 µg	488	525	Hamster IgG FITC	HM01
HMCD8104	R-PE	1.0 ml	100 µg	488	575	Hamster IgG R-PE	HM04

PRODUCT DESCRIPTION

Hamster monoclonal antibody to the mouse CD81(TAPA-1) antigen

Clone: 2F7

Isotype: Armenian hamster IgGκ

Lot No.: See label **Expiration:** See label

Buffer: Phosphate buffered saline (PBS)

Preservatives: 0.1% ***sodium azide.*** Sodium azide is an extremely toxic and dangerous compound particularly when combined with acids or metals. Solutions containing sodium azide should be disposed of properly.

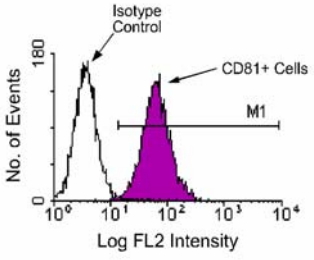
Stabilizer: Sucrose.

PRODUCT CHARACTERIZATION

Antigen Specificity: CD81/TAPA-1 is an integral membrane protein expressed on a variety of cell types, and has a high degree of sequence homology between human and mouse. CD81 is expressed on thymic stromal cells where it plays an important role in the transition of γδ+ T cells to more mature T cells with αβ T cell receptors. Immunohistochemical staining has revealed that its expression is localized to the subcapsular region of the thymus and, specifically, on cells that have distinct clustering patterns. It has been speculated that the ligand for CD81 is the pre-T cell receptor, which is composed of a TCR β chain and glycoprotein pTα. The monoclonal antibody 2F7 can block thymocyte interaction with CD81 In vitro.[1-2]

Research Applications:

- Identification and enumeration of $CD81^+$ cells by flow cytometry
- Immunohistochemistry (frozen sections)
- Immunoprecipitation
- *In vitro* blocking of thymocyte interactions with CD81



The A20 cell line, a murine B cell lymphoma, was stained with hamster anti-mouse CD81-R-PE or hamster IgG-R-PE isotype control, following which the cells were analyzed for the expression of CD81 on a FACScan™ flow cytometer (BDIS, San Jose, CA).

Note: Flow cytometric data shown may not necessarily have been generated using the enclosed lot of reagent. For this reason, and due to differences in flow cytometers and cytometer settings, results may vary from those illustrated above. It is suggested that investigators titrate reagents to determine optimal conditions for use in their systems.

STORAGE & HANDLING

Store reagents at 2-8°C. Light exposure should be avoided for fluorochrome-conjugated reagents. Use dim light during handling, incubation with cells and prior to analysis. It is recommended that cells be analyzed within 18 hours of staining. If the reagent is being diluted, it is recommended that only the quantity to be used within one week be diluted.

PRODUCT QUALITY CONTROL

To ensure lot-to-lot consistency, each batch of monoclonal antibody is tested by flow cytometry to conform to characteristics of a standard reference reagent. From this testing it is recommended that between 0.1 and 0.2 µg of antibody be used per 1 x 10^6 cells in a 100 µl staining volume. Because conditions may vary, it is recommended that each investigator determine the optimal amount of antibody to be used for each application.

* The amount of antibody is determined by measuring the optical density using a spectrophotometer. The antibody titer is verified by immunofluorescent staining and flow cytometric analysis.

REFERENCES:

1. Andria, M.L., et al. 1991. *J. Immunol*. 147:1030.
2. Boismenu, R., M. Rhein, W.H. Fischer, and W.L. Harven. 1996. *Science* 271:198.

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