

## Technical Data Sheet

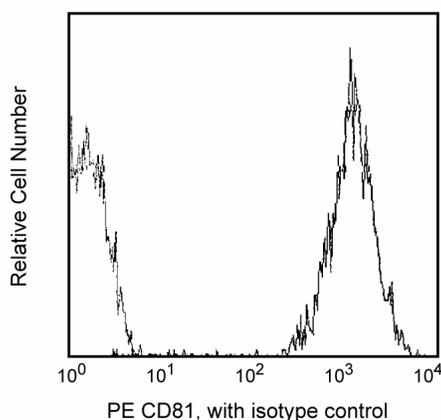
## PE Mouse Anti-Human CD81

## Product Information

<b>Material Number:</b>	<b>561957</b>
<b>Alternate Name:</b>	TAPA1; Tetraspanin-28; Tspan-28; TSPAN28; CVID6; S5.7; M38
<b>Size:</b>	25 Tests
<b>Vol. per Test:</b>	20 µl
<b>Clone:</b>	JS-81
<b>Isotype:</b>	Mouse IgG1, κ
<b>Reactivity:</b>	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon, Dog, Rabbit, Cat, Horse
<b>Workshop:</b>	V B070
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

## Description

The JS-81 monoclonal antibody specifically binds to CD81, which is also known as, Target of the antiproliferative antibody 1 (TAPA1, TAPA-1), or Tetraspanin-28 (Tspan-28/TSPAN28). CD81 is an ~26 kDa transmembrane protein that belongs to the tetraspanin (TM4SF) family. It is involved in cell growth and signal transduction. CD81 has a very broad cellular distribution, being expressed on cells of hematopoietic, neuroectodermal and mesenchymal origin. In hematopoietic cells, the CD81 antigen is expressed on B and T lymphocytes, NK cells, thymocytes, eosinophils, germinal center follicular dendritic cells, and to a variable extent on monocytes. The CD81 antigen is not expressed on neutrophils, platelets, or erythrocytes. CD81-specific antibodies have been shown to have anti-proliferative effects on different lymphoid cell lines, particularly those derived from large cell lymphomas. They are also reported to induce homotypic cell aggregation. Immunoprecipitation studies reveal that CD81 is a component of a multimolecular complex of CD19, CD21, and CD225 that is involved in the activation and control of B cell growth.



**Flow cytometric analysis of CD81 expression on human peripheral blood lymphocytes.** Whole blood was stained with either PE Mouse IgG1, κ Isotype Control (Cat. No. 555749; dashed line histogram) or PE Mouse Anti-Human CD81 (Cat. No. 555676/561957; solid line histogram). Erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). Fluorescent histograms were derived from gated events with the side and forward light-scattering characteristics of viable lymphocytes. Flow cytometry was performed on a BD FACScan™ system.

## Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

## Application Notes

## Application

Flow cytometry	Routinely Tested
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## Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
555749	PE Mouse IgG1, $\kappa$ Isotype Control	100 Tests	MOPC-21
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
349202	BD FACST <sup>™</sup> Lysing Solution	100 mL	(none)
555899	Lysing Buffer	100 mL	(none)
555676	PE Mouse Anti-Human CD81	100 Tests	JS-81

### Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100- $\mu$ l experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
6. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
7. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.

### References

- Bradbury LE, Kansas GS, Levy S, Evans RL, Tedder TF. The CD19/CD21 signal transducing complex of human B lymphocytes includes the target of antiproliferative antibody-1 and Leu-13 molecules. *J Immunol.* 1992; 149(9):2841-2850. (Biology)
- Lin G-X, Yang X, Hollemweguer E, et al. Cross-reactivity of CD antibodies in eight animal species. In: Mason D, David Mason .. et al., ed. *Leucocyte typing VII : white cell differentiation antigens : proceedings of the Seventh International Workshop and Conference held in Harrogate, United Kingdom*. Oxford: Oxford University Press; 2002:519-523. (Clone-specific)
- Oren R, Takahashi S, Doss C, Levy R, Levy S. TAPA-1, the target of an antiproliferative antibody, defines a new family of transmembrane proteins. *Mol Cell Biol.* 1990; 10(8):4007-4015. (Biology)
- Schick MR, Levy S. The TAPA-1 molecule is associated on the surface of B cells with HLA-DR molecules. *J Immunol.* 1993; 151(8):4090-4097. (Biology)