Technical Data Sheet

PE-CF594 Hamster Anti-Mouse CD95

Product Information

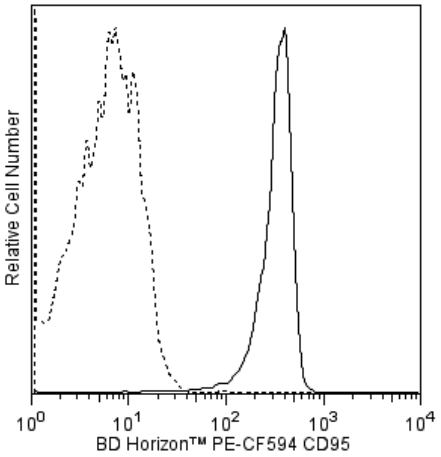
Material Number:	**562499**
Alternate Name:	Apo-1; Apt1; Fas; FASLG receptor; lpr; TNFR6; Tnfrsf6; TNR6
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	Jo2
Immunogen:	WR19L mouse lymphoma cells transformed with recombinant mouse Fas
Isotype:	Armenian Hamster IgG2, λ2
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

Fas antigen, CD95, is a 45 kDa cell-surface protein which can mediate apoptosis. It belongs to the TNF (tumor necrosis factor)/NGF receptor family. Expression of Fas has been described in the thymus, liver, heart, lung and ovary. Fas plays an important role in the apoptotic process that takes place during development. Monoclonal antibodies recognizing Fas such as Jo2 have cytolytic activity on cells expressing Fas. The cell death stimulated by Fas antibodies is characteristic of apoptosis and suggests that the lethal effects are a result of interaction of antibody with a functional Fas antigen as opposed to complement-mediated lysis.

The Jo2 antibody recognizes mouse Fas. The Jo2 antibody shows cytolytic activity against cell lines expressing mouse Fas by inducing apoptosis. Intraperitoneal injections of Jo2 mAb have been shown to kill mice and induce apoptotic hepatocyte death. Jo2 mAb has been reported to immunoprecipitate mouse Fas as a 45 kDa band from W4 cells. W4 cells are WR19L mouse lymphoma cells transformed with mouse Fas. The difference between the observed MW of Fas and that deduced from its amino acid sequence (Mr 34,971) may be due to glycosylation.

This antibody is conjugated to BD Horizon™ PE-CF594, which has been developed exclusively by BD Biosciences as a better alternative to PE-Texas Red®. PE-CF594 excites and emits at similar wavelengths to PE-Texas Red® yet exhibits improved brightness and spectral characteristics. Due to PE having maximal absorption peaks at 496 nm and 564 nm, PE-CF594 can be excited by the blue (488-nm), green (532-nm) and yellow-green (561-nm) lasers and can be detected with the same filter set as PE-Texas Red® (eg 610/20-nm filter).



Flow cytometric analysis of CD95 expression on mouse thymocytes. *Thymocytes from a BALB/c mouse were stained with either a BD Horizon™ PE-CF594 Hamster IgG2, λ1 isotype control (Cat. No. 562522; dashed line histogram) or with the BD Horizon™ PE-CF594 Hamster Anti-Mouse CD95 antibody (Cat. No. 562499; solid line histogram). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable thymocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
The antibody was conjugated with BD Horizon™ PE-CF594 under optimum conditions, and unconjugated antibody and free PE-CF594 were removed.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

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Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
562522	PE-CF594 Hamster IgG2, λ1 Isotype Control	100 µg	Ha4/8
554656	Stain Buffer (FBS)	500 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
5. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
9. CF™ is a trademark of Biotium, Inc.
10. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.
11. This product is provided under an Agreement between BIOTIUM and BD Biosciences. The manufacture, use, sale, offer for sale, or import of this product is subject to one or more patents or pending applications owned or licensed by Biotium, Inc. This product, and only in the amount purchased by buyer, may be used solely for buyer's own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. This product is for research use only. Diagnostic uses require a separate license from Biotium, Inc. For information on purchasing a license to this product including for purposes other than research, contact Biotium, Inc., 3159 Corporate Place, Hayward, CA 94545, Tel: (510) 265-1027. Fax: (510) 265-1352. Email: btinfo@biotium.com.
12. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using multi-laser cytometers, which may directly excite both PE and CF™594.
13. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/documents/hamster_chart_11x17.pdf.

References

Hiromatsu K, Aoki Y, Makino M, et al. Increased Fas antigen expression in murine retrovirus-induced immunodeficiency syndrome, MAIDS. *Eur J Immunol.* 1994; 24(10):2446-2451. (Clone-specific: Cytotoxicity, Flow cytometry, Functional assay)

Kagi D, Vignaux F, Ledermann B, et al. Fas and perforin pathways as major mechanisms of T cell-mediated cytotoxicity. *Science.* 1994; 265(5171):528-530. (Clone-specific: Flow cytometry, Functional assay)

Ogasawara J, Suda T, Nagata S. Selective apoptosis of CD4+CD8+ thymocytes by the anti-Fas antibody. *J Exp Med.* 1995; 181(2):485-491. (Clone-specific: Flow cytometry, Functional assay)

Ogasawara J, Watanabe-Fukunaga R, Adachi M, et al. Lethal effect of the anti-Fas antibody in mice. *Nature.* 1993; 364(6440):806-809. (Immunogen: Flow cytometry, Immunoprecipitation)

Yang Y, Mercep M, Ware CF, Ashwell JD. Fas and activation-induced Fas ligand mediate apoptosis of T cell hybridomas: inhibition of Fas ligand expression by retinoic acid and glucocorticoids. *J Exp Med.* 1995; 181(5):1673-1682. (Clone-specific: Flow cytometry)

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