

Technical Data Sheet

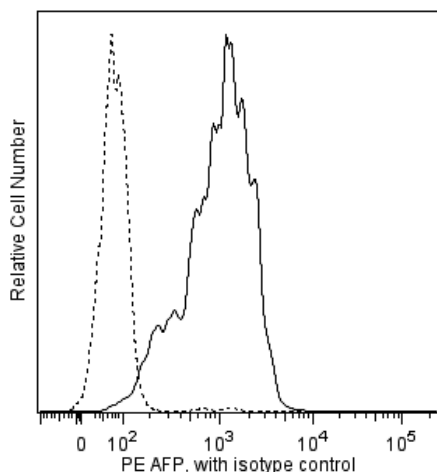
PE Mouse Anti-Human Alpha-fetoprotein

Product Information

Material Number:	563002
Alternate Name:	Alpha-1-fetoprotein, Alpha-fetoglobulin, AFP
Size:	50 tests
Vol. per Test:	5 µl
Clone:	C3/AFP (also known as C3)
Immunogen:	Human Alpha-fetoprotein
Isotype:	Mouse (BALB/c) IgG2a
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

Alpha-fetoprotein (AFP) is a member of the albuminoid gene family which includes albumin, alpha-albumin, and vitamin D protein. Alpha-fetoprotein is an abundant plasma protein synthesized from fetal yolk sac, liver, and gastrointestinal tract during development. Similar to albumin, AFP binds and transports multiple ligands such as nickel, copper, bilirubin, and fatty acids. AFP levels are low to absent in healthy adult tissues whereas elevated AFP levels in the adult can be indicative of malignancies. In particular, AFP is expressed in hepatocellular carcinoma, germ cell tumors, and metastatic cancers of the liver. Maternal serum AFP levels can be monitored to screen for fetal abnormalities. AFP is used as a hepatic progenitor marker in hepatic differentiations from pluripotent stem cells.



Flow cytometric analysis of AFP expression in human liver hepatocellular carcinoma cells. Human liver hepatocellular carcinoma cells Hep G2 (ATCC®, HB-8065™) were harvested with Accutase™ Cell Detachment Solution (Cat. No. 561527), fixed with BD Cytotfix™ fixation buffer (Cat. No. 554655) and permeabilized with BD Phosflow™ Perm buffer III (Cat. No. 558050). The cells were stained with either PE Mouse IgG2a, κ isotype control (dashed line, Cat. No. 558595) or PE Mouse anti-Human Alpha-fetoprotein monoclonal antibody (solid line) at matched concentrations. Histograms were derived from gated events based on light scattering characteristics of HepG2 cells. Flow cytometry was performed on a BD FACSCanto™ II flow cytometry 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

Intracellular staining (flow cytometry)	Routinely Tested
---	------------------

Suggested Companion Products

Catalog Number	Name	Size	Clone
561527	Accutase™ Cell Detachment Solution	100 ml	(none)
554655	Fixation Buffer	100 ml	(none)
558050	Perm Buffer III	125 ml	(none)
558595	PE Mouse IgG2a, κ Isotype Control	50 tests	MOPC-173
554656	Stain Buffer (FBS)	500 ml	(none)

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD



Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Accutase is a registered trademark of Innovative Cell Technologies, Inc.
4. All other brands are trademarks of their respective owners.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
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. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

- Duan Y, Catana A, Meng Y, Yamamoto N, He S, Gupta S, Gambhir SS, Zern MA. Differentiation and enrichment of hepatocyte-like cells from human embryonic stem cells in vitro and in vivo. *Stem Cells*. 2007; 25(15):3058-3068. (Biology)
- Jozefczuk J, Prigione A, Chavez L, Adjaye J. Comparative analysis of human embryonic stem cell and induced pluripotent stem cell-derived hepatocyte-like cells reveals current drawbacks and possible strategies for improved differentiation. *Stem Cells Dev*. 2011; 20(7):1259-1275. (Biology)
- Mizejewski GJ. Alpha-fetoprotein structure and function: relevance to isoforms, epitopes, and conformational variants. *Exp Biol Med (Maywood)*. 2001; 226(5):377-408. (Biology)
- Yazova AK, Goussev AI, Christiansen M, Kushlinsky NE, Stogova E, Norgaard-Pedersen B, Abelev GI. Human fetal and tumor alpha-fetoproteins differ in conformationally dependent epitope variants expression. *Immunol Lett*. 2003; 85(3):261-270. (Clone-specific)
- Yazova AK, Goussev AI, Poltoranina VS, Yakimenko EF. Human alpha-fetoprotein epitopes as revealed by monoclonal antibodies. *Immunol Lett*. 1990; 25(4):325-330. (Clone-specific)

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD

