# **Technical Data Sheet**

# PE-Cy™5 Mouse Anti-Human CD1a

## **Product Information**

Material Number:	555808	
Size:	100 tests	
Vol. per Test:	20 µl	
Clone:	HI149	
Isotype:	Mouse IgG1, ĸ	
Reactivity:	QC Testing: Human	
Workshop:	V 5T CD01.01	
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.	

#### Description

Reacts with a 49 kDa polypeptide associated with β2-microglobulin. CD1a is expressed on cortical thymocytes, dendritic cells and Langerhans cells. CD1a has structural similarities to the MHC class I antigen, and plays a role in antigen presentation.



Profile of MOLT-4 cells analyzed on a FACScan (BDIS, San Jose, CA)

#### **Preparation and Storage**

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

The antibody was conjugated with PE-Cy5 (formerly known as BD Cy-Chrome™) under optimum conditions, and unconjugated antibody and free PE-Cy5 were removed.

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

### **Application Notes**

Applicat	ion					
Flow c	ytometry	Routinely Tested				
Sugge	sted Companion Products					
Catalog	Number Name		Size	Clone		
555750	PE-Cy <sup>TM</sup> 5 Mouse IgG1 κ Isotype Contr	ol	100 tests	MOPC-21		
Produc	t Notices					
	is reagent has been pre-diluted for use at the recommended Vol nple (a test).	ume per Test. We typically use 1 $\times$	10^6 cells in a 100-	µl experimental		
2. Sin	ce applications vary, each investigator should titrate the reagen	t to obtain optimal results.				
3. Ple	3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.					
4. Cy	Cy is a trademark of Amersham Biosciences Limited. This conjugated product is sold under license to the following patents: US Patent Nos.					
5,4	86,616; 5,569,587; 5,569,766; 5,627,027.					
5. PE-	PE-Cy5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the PE-Cy5					
tan	dem fluorochrome, extra care must be taken when using dual-la	aser cytometers which may directly e	excite both PE and	Су5тм.		
<b>BD Bio</b>	sciences					
bdbioscier	nces.com					
United Sta 877.232.89		atin America/Caribbean 800.771.7157		MBL		
	y-specific contact information, visit bdbiosciences.com/how_to_order/	000.771.7157				
Conditions:	The information disclosed herein is not to be construed as a recommendation to use the trans. BD Biosciences will not be held responsible for patent infringement or other violat					

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- 6. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
- 7. PE-Cy5 is a tandem fluorochrome composed of R-phycoerythrin (PE), which is excited by the 488 nm light of an Argon ion laser and serves as an energy donor, coupled to the cyanine dye Cy5, which acts as an energy acceptor and fluoresces at 670 nm. BD Biosciences Pharmingen has maximized the fluorochrome energy transfer in PE-Cy5, thus maximizing its fluorescence emission intensity, minimizing residual emission from PE, and minimizing lot-to-lot variation.
- 8. PE-Cy5 tandem fluorochromes have been reported to bind some classes of human macrophages and granulocytes via Fc receptors, and PE has been reported to bind to mouse B lymphocytes via Fc receptors. Preincubation of mouse leukocytes with Mouse BD Fc Block<sup>TM</sup> purified anti-mouse CD16/CD32 mAb 2.4G2 can reduce the non-specific binding of PE-Cy5-conjugated reagents to mouse B cells. However, PE-Cy5 conjugated reagents should not be used to stain splenocytes of SJL, NOD, and MRL mice as B lymphocytes and/or other leukocytes have been reported to non-specifically stain regardless of the use of Mouse BD Fc Block<sup>TM</sup> (the CD72c complex has been implicated for PE-Cy5 binding in these strains). Reagents conjugated to PE, PerCP, PerCP-Cy5.5, APC, and APC-Cy7 tandem fluorochrome can be used on leukocytes from these mouse strains.
- 9. This product is subject to proprietary rights of Amersham Biosciences Corp. and Carnegie Mellon University and made and sold under license from Amersham Biosciences Corp. This product is licensed for sale only for research. It is not licensed for any other use. If you require a commercial license to use this product and do not have one return this material, unopened to BD Biosciences, 10975 Torreyana Rd, San Diego, CA 92121 and any money paid for the material will be refunded.
- 10. 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.
- 11. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

#### References

Calabi F, Bradbury A. The CD1 system. Tissue Antigens. 1991; 37(1):1-9. (Biology)

Hanau D, Schmitt DA, Bieber T, Schmitt D, Cazenave JP. Possible mechanism of action of CD1a antigens. J Invest Dermatol. 1990; 95(5):503-505. (Biology) Knapp W, Dorken B, Rieber EP, et al, ed. Leucocyte Typing IV. New York: Oxford University Press; 1989:1-1208. (Biology)

Schlossman SF, Boumsell L, Gilks W, et al, ed. Leukocyte Typing V: White Cell Differentiation Antigens. New York: Oxford University Press; 1995.

(Clone-specific)

van Vugt MJ, van den Herik-Oudijk IE, van de Winkle JG. Binding of PE-CY5 conjugates to the human high-affinity receptor for IgG (CD64). Blood. 1996; 88(6):2358-2361. (Biology)