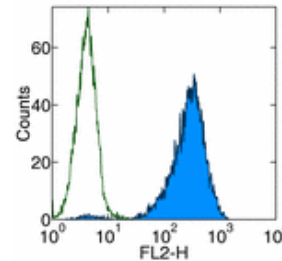


## Product Information

Contents: Biotin anti-mouse Tim-3 (Th1-specific marker)  
Catalog Number: 13-5871  
Sizes: 50 ug, 100 ug, 500 ug  
Formulation: Phosphate buffer pH 7.2,  
150 mM NaCl, 0.09% NaN<sub>3</sub>  
Storage Conditions: Store at 4°C.  
DO NOT FREEZE.  
Clone: 8B.2C12  
Isotype: Rat IgG1, κ



Surface staining of TIM-3 transfected cells with anti-mouse TIM-3 (8B.2C12) PE. Appropriate isotype controls were used (open histogram). Total viable cells were used for analysis.

Available Formats of This Product				
Cat. No.	Format	Excite (nm)	Emit (nm)	Reported Applications
12-5871	PE anti-mouse TIM-3 (TIM3, Th1 specific marker, blocking / neutralizing)	488	575	FC
13-5871	Biotin anti-mouse TIM-3 (TIM3, Th1 specific marker, blocking / neutralizing)	N/A	N/A	FC
14-5871	Affinity Purified anti-mouse TIM-3 (TIM3, Th1 specific marker, blocking / neutralizing)	N/A	N/A	FA FC IP
16-5871	Functional Grade* Purified anti-mouse TIM-3 (TIM3, Th1 specific marker, blocking / neutralizing)	N/A	N/A	FC

\*Functional Grade™ (FG™): Azide-free, sterile-filtered, and endotoxin < 0.001 ng/μg.  
Purified: Contains azide, not sterile-filtered, and not endotoxin tested.

## Description

The 8B.2C12 monoclonal antibody reacts with mouse Tim-3, a Th1-specific cell surface protein. The 8B.2C12 antibody binds to the Tim-3 BALB/c allele. Tim-3, a type I transmembrane protein, contains an immunoglobulin and a mucin-like domain in its extracellular portion and a tyrosine phosphorylation motif in its cytoplasmic portion. Tim-3 is expressed selectively by differentiated CD4<sup>+</sup>Th1 and CD8<sup>+</sup>Tc1 cells, but is absent on CD4<sup>+</sup>Th2 and CD8<sup>+</sup>Tc2 cells. Other hematopoietic cell types, including naïve T cells, B cells, macrophages and dendritic cells, do not express Tim-3, at least at the protein level. Tim-3 expression is upregulated at a late stage of T cell differentiation on Th1 cells after 3 rounds of *in vitro* polarization suggesting a role for this molecule in the transport or effector function of Th1 cells rather than a contribution to T cell differentiation. In an experimental autoimmune encephalomyelitis (EAE) model, Tim-3 was shown to be expressed on most CD4<sup>+</sup> and CD8<sup>+</sup> T cells in the central nervous system at the onset of clinical signs of disease, while less than 2% of CD4<sup>+</sup> cells in the periphery expressed Tim-3 after immunization. In this model, *in vivo* administration of 8B.2C12 resulted in a hyperacute and atypical disease phenotype. It is postulated that the engagement of Tim-3 during T cell activation results in the expansion and activation of macrophages and increased severity of an autoimmune disease. The Tim gene family may have an important role in the regulation of autoimmunity and allergies.

## Usage

For research use only, not for diagnostic or therapeutic use. 8B.2C12 has been reported for use in flow cytometric analysis.

## Applications Tested

The 8B.2C12 antibody has been tested by flow cytometric analysis of mouse splenocytes and mouse Tim-3 transfected cells and can be used at less than or equal to 0.5 μg/million cells. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

## Related Products

Cat. 13-4301 Biotin Rat IgG1 Isotype Control

Cat. 11-4317 Streptavidin-FITC (Fluorescein isothiocyanate)  
Cat. 12-4317 Streptavidin-PE (Phycoerythrin)

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#### References

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Monney, L., C.A. Sabatos, et al. 2002. Th1-specific cell surface protein Tim-3 regulates macrophage activation and severity of an autoimmune disease. *Nature* 415(6871): 536-41.

McIntire J.J., S.E. Umetsu, et al. 2001. Identification of Tapr (an airway hyperreactivity regulatory locus) and the linked Tim gene family. *Nat Immunol.* 2(12):1109-16.

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