# Human TIM-3 Antibody

Monoclonal Rat $IgG_{2A}$ Clone # 344823

Catalog Number: MAB2365

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human TIM-3 in direct ELISAs and Western blots. Does not cross-react with recombinant human (rh) TIM-1, rhTIM-4, recombinant mouse (rm) TIM-1, rmTIM-2, rmTIM-3, rmTIM-5, or rmTIM-6. |
| **Source** | Monoclonal Rat $IgG_{2A}$ Clone # 344823 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant human TIM−3<br>Ser22-Arg200<br>Accession # Q8TDQ0.2 |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS. |

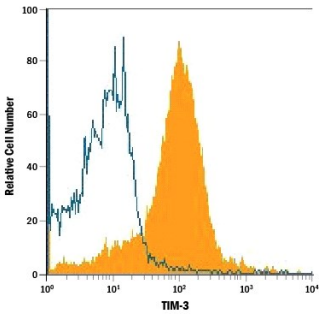
## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Flow Cytometry** | 2.5 µg/$10^6$ cells | See Below |

## DATA

**Flow Cytometry**




**Detection of TIM-3 in Human Monocytes by Flow Cytometry.** Human peripheral blood monocytes were stained with Rat Anti-Human TIM-3 Monoclonal Antibody (Catalog # MAB2365, filled histogram) or isotype control antibody (Catalog # MAB006, open histogram), followed by Phycoerythrin-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0105B).

## PREPARATION AND STORAGE

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|---|---|
| **Reconstitution** | Reconstitute at 0.5 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

## BACKGROUND

TIM-3 (T cell Immunoglobulin and Mucin domain-3) is a 60 kDa member of the TIM family of immune regulating molecules. TIMs are type I transmembrane glycoproteins with one Ig-like V-type domain and a Ser/Thr-rich mucin stalk (1-3). Mature human TIM-3 consists of a 181 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 78 aa cytoplasmic tail (4). An alternately spliced isoform is truncated following a short substitution after the Ig-like domain. Within the ECD, human TIM-3 shares 58% aa sequence identity with mouse and rat TIM-3. TIM-3 is expressed on the surface of effector T cells ($CD4^+$ Th1 and $CD8^+$ Tc1) but not on helper T cells ($CD4^+$ Th2 and $CD8^+$ Tc2) (4, 5). In chronic inflammation, autoimmune disorders, and some cancers, TIM-3 is upregulated on several other hematopoietic cell types. The Ig domain of TIM-3 interacts with a ligand on resting but not activated Th1 and Th2 cells (5, 6). The glycosylated Ig domain of TIM-3 binds cell-associated galectin-9. This induces TIM-3 Tyr phosphorylation and proapoptotic signaling (7). TIM-3 functions as a negative regulator of Th1 cell activity. Its blockade results in increased IFN-γ production, Th1 cell proliferation and cytotoxicity (5, 6, 8), regulatory T cell development (5), and increases in macrophage and neutrophil infiltration into sites of inflammation (9).

**References:**


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