

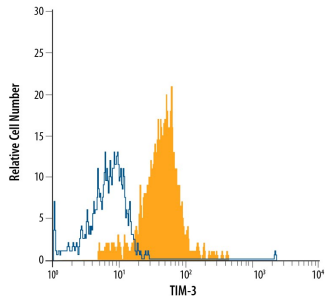
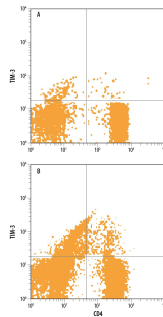
| DESCRIPTION | |
|---------------------------|--|
| Species Reactivity | Human |
| Specificity | Detects human TIM-3 in direct ELISAs and Western blots. Does not cross-react with recombinant human (rh) TIM-1, rhTIM-4, recombinant mouse (rm) TIM-1, rmTIM-2, rmTIM-3, rmTIM-5, or rmTIM-6. |
| Source | 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 Ser22-Arg200 Accession # Q8TDQ0.2 |
| Conjugate | Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm |
| Formulation | Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

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 | 5 µL/10 ⁶ cells | See Below |

DATA

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| <p>Flow Cytometry</p>  <p>Detection of TIM-3 in Human PBMCs Monocytes by Flow Cytometry. Human peripheral blood mononuclear cell (PBMC) monocytes were stained with Rat Anti-Human TIM-3 Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # FAB2365G, filled histogram) or isotype control antibody (Catalog # IC006G, open histogram). View our protocol for Staining Membrane-associated Proteins.</p> | <p>Flow Cytometry</p>  <p>Detection of TIM-3 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) either (A) untreated or (B) treated with Recombinant Human IL-12 (Catalog # 219-IL) and Goat Anti-Human IL-4 Polyclonal Antibody (Catalog # AB-204-NA) to induce Th1 development for 3 days were stained with Mouse Anti-Human CD4 PE-conjugated Monoclonal Antibody (Catalog # FAB3791P) and either (A) Rat Anti-Human TIM-3 Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # FAB2365G) or (B) Rat IgG_{2A} Alexa Fluor 488 Isotype Control (Catalog # IC006G). Dot plots were gated on lymphocytes. View our protocol for Staining Membrane-associated Proteins.</p> |
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PREPARATION AND STORAGE

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|--------------------------------|--|
| Shipping | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| Stability & Storage | Protect from light. Do not freeze. <ul style="list-style-type: none"> • 12 months from date of receipt, 2 to 8 °C as supplied. |

BACKGROUND

TIM-3 (T cell immunoglobulin and mucin domain-3), also known as HAVCR2, 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 region (1, 2). 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 (3). An alternatively spliced isoform is truncated within the mucin-like stalk. Within the ECD, human TIM-3 shares 58% aa sequence identity with mouse and rat TIM-3. TIM-3 is up-regulated on several populations of activated myeloid cells (macrophage, monocyte, dendritic cell, microglia, mast cell) and T cells (Th1, CD8⁺, NK, Treg) (3-10). Its binding to Galectin-9 induces a range of immunosuppressive functions which enhance immune tolerance and inhibit anti-tumor immunity (11). TIM-3 ligation attenuates CD8⁺ and Th1 cell responses (11-13) and promotes the activity of Treg and myeloid derived suppressor cells (8, 11, 13, 14). In addition, dendritic cell-expressed TIM-3 dampens inflammation by enabling the phagocytosis of apoptotic cells and the cross-presentation of apoptotic cell antigens (4). It also binds the alarmin HMGB1, thereby preventing the activation of TLRs in response to released tumor cell DNA (7). TIM-3 interactions with Galectin-9 can alternatively trigger immune stimulatory effects, such as the coactivation of NK cell cytotoxicity (10).

References:

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