

## DESCRIPTION

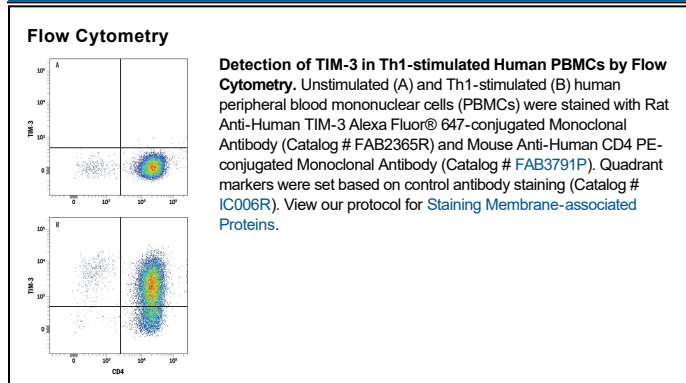
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human TIM-3 in direct ELISAs and Western blots. Does not cross-react with recombinant human (rh) TIM-1, rhTIM-4, recombinant mouse (rm) TIM-1, rmTIM-2, rmTIM-3, rmTIM-5, or rmTIM-6.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 344823
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human TIM-3 Ser22-Arg200 Accession # Q8TDQ0.2
<b>Conjugate</b>	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
<b>Formulation</b>	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
<b>Flow Cytometry</b>	5 µL/10 <sup>6</sup> cells	See Below

## DATA



## PREPARATION AND STORAGE

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

**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 (macrophages, monocytes, dendritic cells, microglia, and mast cells) and T cells (Th1, CD8<sup>+</sup>, NK, and 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<sup>+</sup> 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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