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# TIM-3 (D5D5R™) XP® Rabbit mAb (Alexa Fluor® 488 Conjugate)


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TECHNOLOGY®

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<b>Applications:</b> FC-L	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q8TDQ0	<b>Entrez-Gene Id:</b> 84868
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<b>Product Usage Information</b>	<b>Application</b> Flow Cytometry (Live)	<b>Dilution</b> 1:50
<b>Storage</b>	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
<b>Specificity / Sensitivity</b>	TIM-3 (D5D5R™) XP® Rabbit mAb (Alexa Fluor® 488 Conjugate) recognizes endogenous levels of total TIM-3 protein.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the extracellular domain of human TIM-3 protein.	
<b>Product Description</b>	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometric analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated TIM-3 (D5D5R™) XP® Rabbit mAb #45208.	
<b>Background</b>	T cell Ig- and mucin-domain-containing molecules (TIMs) are a family of transmembrane proteins expressed by various immune cells. TIM-3 is an inhibitory molecule that is induced following T cell activation (1-3). TIM-3 is expressed by exhausted T cells in the settings of chronic infection and cancer (4,5), and tumor-infiltrating T cells that coexpress PD-1 and TIM-3 exhibit the most severe exhausted phenotype (5). Tumor-infiltrating dendritic cells (DCs) also express TIM-3. TIM-3 expression on DCs was found to suppress innate immunity by reducing the immunogenicity of nucleic acids released by dying tumor cells (6). Research studies show that heterodimerization of TIM-3 with CEACAM-1 is critical for the inhibitory function of TIM-3, and co-blockade of TIM-3 and CEACAM-1 enhanced anti-tumor responses in a mouse model of colorectal cancer (7). In addition, blockade of TIM-3 in mouse models of autoimmunity enhanced the severity of disease (1). Finally, binding of Galectin-9 to TIM-3 expressed by Th1 cells induces T cell death (8).	
<b>Background References</b>	1. Monney, L. et al. (2002) <i>Nature</i> 415, 536-41. 2. Sánchez-Fueyo, A. et al. (2003) <i>Nat Immunol</i> 4, 1093-101. 3. Sabatos, C.A. et al. (2003) <i>Nat Immunol</i> 4, 1102-10. 4. Jones, R.B. et al. (2008) <i>J Exp Med</i> 205, 2763-79. 5. Sakuishi, K. et al. (2010) <i>J Exp Med</i> 207, 2187-94. 6. Chiba, S. et al. (2012) <i>Nat Immunol</i> 13, 832-42. 7. Huang, Y.H. et al. (2015) <i>Nature</i> 517, 386-90. 8. Zhu, C. et al. (2005) <i>Nat Immunol</i> 6, 1245-52.	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Applications Key</b>	<b>FC-L:</b> Flow Cytometry (Live)
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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