Revision 1

#67761 Store at +4C

TIM-3 (D5D5R™) XP® Rabbit mAb (PE Conjugate)

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-L	H	Endogenous	Rabbit IgG	#Q8TDQ0	84868

Product Usage Information

Application	Dilution
Flow Cytometry (Live)	1:50

Storage

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.

Specificity / Sensitivity

TIM-3 (D5D5R™) XP® Rabbit mAb (PE Conjugate) recognizes endogenous levels of total TIM-3 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the extracellular domain of human TIM-3 protein.

Product Description

This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry 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.

Background

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).

Background References

1. Monney, L. et al. (2002) *Nature* 415, 536-41.
2. Sánchez-Fueyo, A. et al. (2003) *Nat Immunol* 4, 1093-101.
3. Sabatos, C.A. et al. (2003) *Nat Immunol* 4, 1102-10.
4. Jones, R.B. et al. (2008) *J Exp Med* 205, 2763-79.
5. Sakuishi, K. et al. (2010) *J Exp Med* 207, 2187-94.
6. Chiba, S. et al. (2012) *Nat Immunol* 13, 832-42.
7. Huang, Y.H. et al. (2015) *Nature* 517, 386-90.
8. Zhu, C. et al. (2005) *Nat Immunol* 6, 1245-52.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-L: Flow Cytometry (Live)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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