Revision 5

#83882 Store at -20C

TIM-3 (D3M9R) XP® Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IHC-Bond, IHC-P	M	Endogenous	45-80	Rabbit IgG	#Q8VIM0	171285

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
IHC Leica Bond	1:800
Immunohistochemistry (Paraffin)	1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #72911.

Specificity / Sensitivity

TIM-3 (D3M9R) XP® Rabbit mAb recognizes endogenous levels of total TIM-3 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro137 of mouse TIM-3 protein.

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).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IHC-Bond:** IHC Leica Bond
IHC-P: Immunohistochemistry (Paraffin)

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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