Revision 4

Store at -20C

#14971

TIM-1 (E1R9N) Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-P	H	Endogenous	50, 90-140	Rabbit IgG	#Q96D42	26762

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:100

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 #71010.

Specificity/Sensitivity

TIM-1 (E1R9N) Rabbit mAb recognizes endogenous levels of total TIM-1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val24 of human TIM-1 protein.

Background

T cell Ig- and mucin-domain-containing molecules (TIMs) are a family of transmembrane proteins expressed by various immune cells. TIM-1 (HAVCR1 (hepatitis A virus cellular receptor 1), KIM-1 (kidney injury molecule-1) was originally identified as a receptor for hepatitis A virus (1). TIM-1 also acts as a costimulatory receptor on T cells and following activation, associates with the TCR complex to upregulate signaling and cytokine production (2-5). Another TIM family member, TIM-4, is expressed by antigen presenting cells and is a ligand for TIM-1 (6). TIM-1 expressed by Th1 and Th17 cells was also recently shown to interact with P-selectin to mediate T cell trafficking during inflammation and autoimmune disease (7). NKT cells also express TIM-1, and engagement of TIM-1 on NKT cells leads to increased production of IL-4, but decreased production of IFN-gamma (8). TIM-1 is also a receptor for phosphatidylserine exposed by cells undergoing apoptosis. Detection of phosphatidylserine by TIM-1 expressed on NKT cells results in activation, proliferation, and cytokine production (9). Expression of TIM-1 on regulatory B cells is required for optimal production of IL-10. Mice lacking the TIM-1 mucin domain have decreased production of IL-10 by regulatory B cells, hyperactive T cells, increased levels of inflammatory cytokines, and enhanced severity of autoimmune disease (10,11). In addition, TIM-1 polymorphisms are associated with susceptibility to atopic diseases including asthma (12,13). Finally, expression of TIM-1 is increased in renal tubular epithelial cells following kidney injury (14).

Background References

1. Kaplan, G. et al. (1996) *EMBO J* 15, 4282-96.
2. Umetsu, S.E. et al. (2005) *Nat Immunol* 6, 447-54.
3. de Souza, A.J. et al. (2005) *Proc Natl Acad Sci U S A* 102, 17113-8.
4. Binné, L.L. et al. (2007) *J Immunol* 178, 4342-50.
5. de Souza, A.J. et al. (2008) *J Immunol* 180, 6518-26.
6. Meyers, J.H. et al. (2005) *Nat Immunol* 6, 455-64.
7. Angiari, S. et al. (2014) *Immunity* 40, 542-53.
8. Kim, H.S. et al. (2010) *J Immunol* 184, 4095-106.
9. Lee, H.H. et al. (2010) *J Immunol* 185, 5225-35.
10. Xiao, S. et al. (2012) *Proc Natl Acad Sci U S A* 109, 12105-10.
11. Xiao, S. et al. (2015) *J Immunol* 194, 1602-8.
12. McIntire, J.J. et al. (2001) *Nat Immunol* 2, 1109-16.
13. Khademi, M. et al. (2004) *J Immunol* 172, 7169-76.
14. Ichimura, T. et al. (1998) *J Biol Chem* 273, 4135-42.

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

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

SignalStain is a registered trademark of Cell Signaling Technology, Inc.

This product is provided under an intellectual property license from Life Technologies Corporation. The transfer of this product is conditioned on the buyer using the purchased product solely in research conducted by the buyer, excluding contract research or any fee for service research, and the buyer must not (1) use this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; or (c) manufacturing or quality assurance or quality control, and/or (2) sell or transfer this product or its components for resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@lifetech.com.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.