

TIM-3 (H-191): sc-292389

BACKGROUND

CD4⁺ T helper lymphocytes can be divided into types 1 (Th1) and 2 (Th2) on the basis of their cytokine secretion patterns. Th1 cells and their associated cytokines are involved in cell-mediated immunity to intracellular pathogens and delayed-type hypersensitivity reactions. Th2 cells are involved in the control of extracellular helminthic infections and the promotion of atopic and allergic diseases. T cell Ig- and Mucin-domain-containing molecules (TIMs) are a family of molecules expressed on T cells. TIM-3 is a Th1-specific cell surface protein that regulates macrophage activation and enhances the severity of experimental autoimmune encephalomyelitis in mice. TIM-3 binds galectin-9, thereby inducing apoptosis of Th1 cells. This interaction with galectin-9 also stimulates the phosphorylation of Tim-3 on residue Y265 by the interleukin-inducible T cell kinase, Emt.

REFERENCES

1. Monney, L., Sabatos, C.A., Gaglia, J.L., Ryu, A., Waldner, H., Chernova, T., Manning, S., Greenfield, E.A., Coyle, A.J., Sobel, R.A., Freeman, G.J. and Kuchroo, V.K. 2002. Th1-specific cell surface protein TIM-3 regulates macrophage activation and severity of an autoimmune disease. *Nature* 415: 536-541.
2. Sánchez-Fueyo, A., Tian, J., Picarella, D., Domenig, C., Zheng, X.X., Sabatos, C.A., Manlongat, N., Bender, O., Kamradt, T., Kuchroo, V.K., Gutierrez-Ramos, J.C., Coyle, A.J. and Strom, T.B. 2003. TIM-3 inhibits T helper type 1-mediated auto- and alloimmune responses and promotes immunological tolerance. *Nat. Immunol.* 4: 1093-1101.
3. Sabatos, C.A., Chakravarti, S., Cha, E., Schubart, A., Sánchez-Fueyo, A., Zheng, X.X., Coyle, A.J., Strom, T.B., Freeman, G.J. and Kuchroo, V.K. 2003. Interaction of TIM-3 and TIM-3 ligand regulates T helper type 1 responses and induction of peripheral tolerance. *Nat. Immunol.* 4: 1102-1110.
4. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 606652. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Chae, S.C., Song, J.H., Pounsambath, P., Yuan, H.Y., Lee, J.H., Kim, J.J., Lee, Y.C. and Chung, H.T. 2004. Molecular variations in Th1-specific cell surface gene TIM-3. *Exp. Mol. Med.* 36: 274-278.

CHROMOSOMAL LOCATION

Genetic locus: HAVCR2 (human) mapping to 5q33.3.

SOURCE

TIM-3 (H-191) is a rabbit polyclonal antibody raised against amino acids 111-301 mapping at the C-terminus of TIM-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

TIM-3 (H-191) is recommended for detection of TIM-3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TIM-3 siRNA (h): sc-72034, TIM-3 shRNA Plasmid (h): sc-72034-SH and TIM-3 shRNA (h) Lentiviral Particles: sc-72034-V.

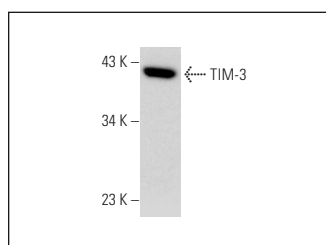
Molecular Weight of TIM-3: 33 kDa.

Positive Controls: human liver extract: sc-363766.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TIM-3 (H-191): sc-292389. Western blot analysis of TIM-3 expression in human liver tissue extract.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.