

TIM-4 (G-6): sc-390805



The Power to Question

BACKGROUND

TIM-4 (T-cell immunoglobulin and mucin domain containing 4), also known as SMUCKLER or TIMD4, is a 378 amino acid single-pass type I membrane protein that contains one Ig-like (immunoglobulin-like) V-type domain and belongs to the immunoglobulin superfamily. Expressed predominately in lymphoid tissues, such as spleen, TIM-4 interacts with TIM-1 and is thought to function as a phosphatidyserine receptor, possibly playing a role in apoptotic cell uptake and T-cell proliferation, indicating potential involvement in immune system regulation. The gene encoding TIM-4 maps to human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm or of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

CHROMOSOMAL LOCATION

Genetic locus: TIMD4 (human) mapping to 5q33.3; Timd4 (mouse) mapping to 11 B1.1.

SOURCE

TIM-4 (G-6) is a mouse monoclonal antibody raised against amino acids 121-378 mapping at the C-terminus of TIM-4 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TIM-4 (G-6) is available conjugated to agarose (sc-390805 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390805 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390805 PE), fluorescein (sc-390805 FITC), Alexa Fluor® 488 (sc-390805 AF488), Alexa Fluor® 546 (sc-390805 AF546), Alexa Fluor® 594 (sc-390805 AF594) or Alexa Fluor® 647 (sc-390805 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390805 AF680) or Alexa Fluor® 790 (sc-390805 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

TIM-4 (G-6) is recommended for detection of TIM-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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-4 siRNA (h): sc-76664, TIMP-4 siRNA (m): sc-36680, TIM-4 shRNA Plasmid (h): sc-76664-SH, TIMP-4 shRNA Plasmid (m): sc-36680-SH, TIM-4 shRNA (h) Lentiviral Particles: sc-76664-V and TIMP-4 shRNA (m) Lentiviral Particles: sc-36680-V.

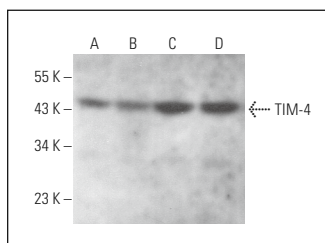
Molecular Weight of TIM-4: 42 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

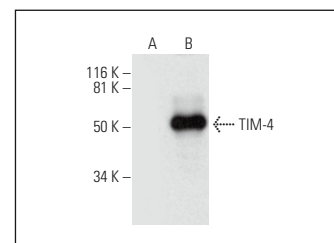
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TIM-4 (G-6): sc-390805. Western blot analysis of TIM-4 expression in HeLa (A), Jurkat (B), HL-60 (C) and WEHI-231 (D) whole cell lysates.



TIM-4 (G-6): sc-390805. Western blot analysis of TIM-4 expression in non-transfected (A) and human TIM-4 transfected (B) HEK293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Wang, J., et al. 2017. TIM-1 promotes hepatitis C virus cell attachment and infection. *J. Virol.* 91: e01583-16.
- Liu, W., et al. 2019. TIM-4 inhibits NLRP3 inflammasome via the LKB1/AMPKα pathway in macrophages. *J. Immunol.* 203: 990-1000.
- Wu, L., et al. 2021. Effects of RGD-grafted phosphatidyserine-containing liposomes on the polarization of macrophages and bone tissue regeneration. *Biomaterials* 279: 121239.
- Wang, Y., et al. 2022. Tim-4 reprograms cholesterol metabolism to suppress antiviral innate immunity by disturbing the Insig1-SCAP interaction in macrophages. *Cell Rep.* 41: 111738.
- Wang, M., et al. 2023. Identification of circulating T-cell immunoglobulin and mucin domain 4 as a potential biomarker for coronary heart disease. *MedComm* 4: e320.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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