Purified anti-TICAM-1 (TRIF) Antibody

Catalog# / Size	657102 / 100 µg
Clone	1H4B01
Regulatory Status	RUO
Other Names	TIR domain-containing adapter molecule 1, TRIF, MyD88-3, Proline-Rich, Vinculin And TIR Domain-Containing Protein B (PRVTIRB)
Isotype	Mouse IgG2a, κ
Description	TICAM-1, also known as TRIF, is an intracellular adaptor protein utilized by TLR3 and TLR4. TLR3 recognizes double stranded viral RNA and induces TICAM-1 mediated type I interferon production. The N-terminal region of TICAM-1 recruits TBK1 and IKKi, which in turn phosphorylates the interferon regulatory transcription factor IRF3. The phosphorylated IRF3 is subsequently dimerized and translocates to the nucleus, resulting in transcriptional activation of the gene encoding IFN-β. Mice lacking in TICAM-1 expression are defective in the TLR3 mediated induction of proinflamatory cytokines, suggesting that TICAM-1 is crucial for TLR3 downstream signaling. TICAM-1 also mediates TLR4-induced signaling in the presence of the adaptor molecule TRAM. The C-terminal region of TICAM-1 recruits RIP1 and induces apoptosis through FADD/caspase cascade.

Product Details

Verified Reactivity	Human, Mouse
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Partial human TICAM-1 recombinant protein (29-204 a.a.)
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - Quality tested ICC, IP, IHC-P - Verified
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting. For Western blotting, the suggested use of this reagent is 0.1 - 1.0 µg per ml. For immunocytochemistry, a concentration of 5.0 µg/ml is recommended. For immunoprecipitation, the suggested use of this reagent is 2.0 - 10 µg per ml. For immunohistochemistry on formalin-fixed paraffin-embedded tissue sections, a concentration range of 1.0 - 10.0 µg/mL is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
Product Citations	1. Liu Z, *et al.* 2021. Immunity. 54(2):247-258.e7. PubMed 2. Oldenburg R, *et al.* 2018. Front Immunol. 9:2. PubMed 3. Bhattacharjee P, *et al.* 2018. Sci Rep. 13:e0199785. PubMed
RRID	AB_2562543 (BioLegend Cat. No. 657102)

Antigen Details

Structure	712 amino acids, predicted molecular weight of 76 kD. Contains a Toll/interleukin-1 receptor (TIR) homology domain responsible for mediating protein-protein interactions.

Distribution	Cytosol, endosome membrane
Function	TICAM-1 acts as an adaptor protein of TLR3 and TLR4 (through TRAM), mediating innate immune responses during viral infection.
Interaction	TICAM-1 interacts with TLR3, TRAM, TBK1, IRF3, IRF7, TRAF3, TRAF6, and IKKi.
Biology Area	Cell Biology, Immunology, Innate Immunity, Neuroscience
Molecular Family	Toll Like Receptors
Antigen References	1. Petnicki-Ocwieja T, *et al.* 2013. *Infect Immun.* 81:402. 2. Riad A, *et al.* 2011. *J. Immunol.* 186:2561. 3. Choi YJ, *et al.* 2010. *J. Biol. Chem.* 285:21382. 4. Gais P, *et al.* 2010. *J. Immunol.* 184:5842. 5. Han KJ, *et al.* 2010. *J. Biol. Chem.* 285:12543. 6. Takeda K and Akira S. 2005. *Int. Immunol.* 17:1.
Gene ID	148022

Related Protocols

Immunocytochemistry Staining Protocol

Western Blotting Protocol

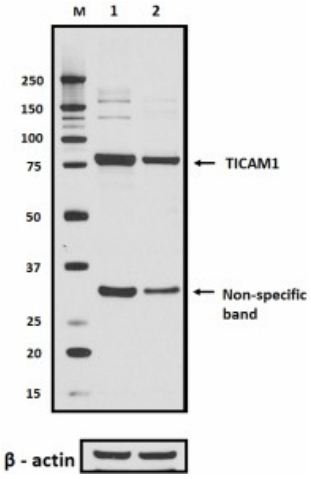
Immunoprecipitation Protocol

Immunohistochemistry Protocol for Paraffin-Embedded Sections

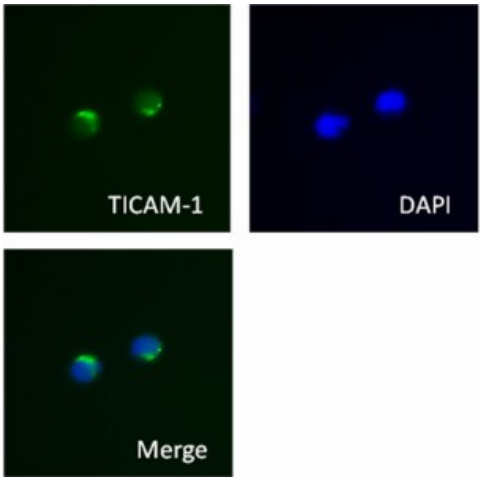
Other Formats

Purified anti-TICAM-1 (TRIF)

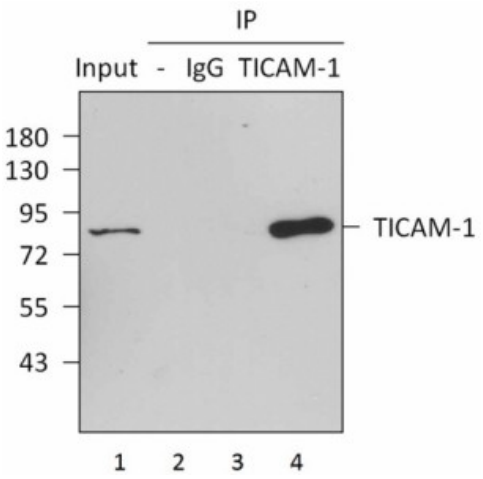
Product Data



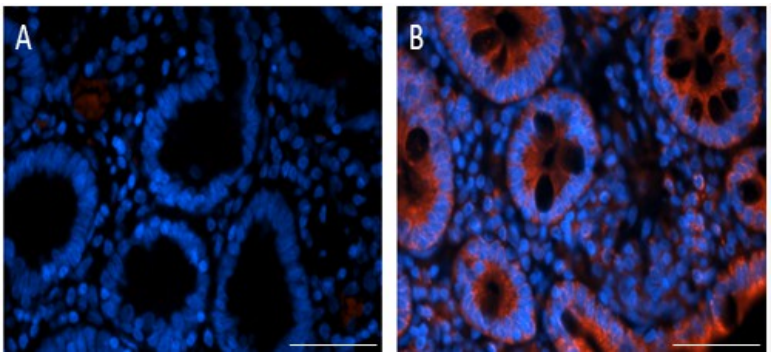
Total lysates (15 µg protein) from HepG2 (lane 1) and HeLa (lane 2) cells were resolved by electrophoresis (4-12% Bis-Tris gel), transferred to nitrocellulose, and probed with 1:500 diluted (1 µg/mL) purified anti-TICAM-1 antibody (clone 1H4B01, upper). Proteins were visualized by chemiluminescence detection using a 1:3000 diluted HRP goat anti-mouse IgG secondary antibody for the anti-TICAM-1 antibody or 1:5000 diluted Direct-Blot™ HRP anti-β-actin antibody (clone 2F1-1, lower). Lane M: Molecular weight ladder.



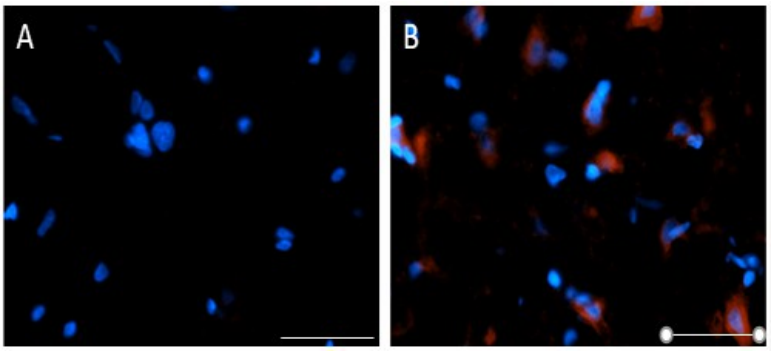
Raji cells were stained with purified anti-TICAM-1 (clone 1H4B01) antibodies, followed by staining with DyLight™ 488 conjugated goat anti-mouse IgG (green) antibody. Nuclei were stained with DAPI (blue).



Immunoprecipitation of TICAM1 from Raji cell extracts. Lane 1 is 5% input. Immunoprecipitation was performed using protein G resins only (lane 2), mouse IgG isotype control (lane 3), and anti-TICAM1 antibody (clone 1H4B01, lane 4). Western blot was performed using anti-TICAM1 antibody (clone 1H4B01).



IHC staining using purified anti-TICAM-1 (TRIF) (clone 1H4B01) on formalin-fixed paraffin-embedded human small intestine tissue. Following antigen retrieval using 1X Tris-EDTA, Ph 9.0, the tissue was incubated with (B) or without (A) 1.0 µg/mL of antibody overnight at 4°C, followed by incubation with 2.5 µg/mL of Alexa Fluor® 647 goat anti-mouse IgG (Cat. No. 405322) for one hour at room temperature. Nuclei were counterstained with DAPI (blue) (Cat. No. 422801), and the slide was mounted with ProLong™ Gold Antifade Mountant. The image was captured with a 40X objective. Scalebar = 50 µM



IHC staining using purified anti-TICAM-1 (TRIF) (clone 1H4B01) on formalin-fixed paraffin-embedded human cortex tissue. Following antigen retrieval using 1X Tris-EDTA, pH 9.0, the tissue was incubated with (B) or without (A) 10.0 µg/mL of antibody overnight at 4°C, followed by incubation with 2.5 µg/mL of Alexa Fluor® 647 goat anti-mouse IgG (Cat. No. 405322) for one hour at room temperature. Nuclei were counterstained with DAPI (blue) (Cat. No. 422801), and the slide was mounted with ProLong™ Gold Antifade Mountant. The image was captured with a 40X objective. Scalebar = 50 µM

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BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587