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TRIF Antibody

Catalog # ASC10205

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q8IUC6
Other Accession	NP_891549, 41281981
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	76422
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TRIF antibody can be used for detection of TRIF by Western blot at 2 to 4 g/mL. Antibody can also be used for immunohistochemistry starting at 10 g/mL. For immunofluorescence start at 10 g/mL.

Additional Information

Gene ID	148022
Other Names	TRIF Antibody: TRIF, IIAE6, MyD88-3, PRVTIRB, TICAM-1, TRIF, TIR domain-containing adapter molecule 1, Proline-rich, vinculin and TIR domain-containing protein B, toll-like receptor adaptor molecule 1
Target/Specificity	TICAM1;
Reconstitution & Storage	TRIF antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	TRIF Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TICAM1
Synonyms	PRVTIRB, TRIF
Function	Involved in innate immunity against invading pathogens. Adapter used by TLR3, TLR4 (through TICAM2) and TLR5 to mediate NF- kappa-B and interferon-regulatory factor (IRF) activation, and to induce apoptosis (PubMed:12471095, PubMed:12539043, PubMed:14739303, PubMed:28747347, PubMed:35215908). Ligand binding to these receptors results in TRIF recruitment through its TIR domain (PubMed:12471095,

	PubMed:12539043, PubMed:14739303). Distinct protein-interaction motifs allow recruitment of the effector proteins TBK1, TRAF6 and RIPK1, which in turn, lead to the activation of transcription factors IRF3 and IRF7, NF-kappa-B and FADD respectively (PubMed:12471095, PubMed:12539043, PubMed:14739303). Phosphorylation by TBK1 on the pLxIS motif leads to recruitment and subsequent activation of the transcription factor IRF3 to induce expression of type I interferon and exert a potent immunity against invading pathogens (PubMed:25636800). Component of a multi-helicase-TICAM1 complex that acts as a cytoplasmic sensor of viral double-stranded RNA (dsRNA) and plays a role in the activation of a cascade of antiviral responses including the induction of pro- inflammatory cytokines (By similarity).
Cellular Location	Cytoplasmic vesicle, autophagosome. Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q80UF7}. Mitochondrion {ECO:0000250|UniProtKB:Q80UF7}. Note=Colocalizes with UBQLN1 in the autophagosome (PubMed:21695056). Colocalizes in the cytosol with DDX1, DDX21 and DHX36. Colocalizes in the mitochondria with DDX1 and poly(I:C) RNA ligand. The multi-helicase-TICAM1 complex may translocate to the mitochondria upon poly(I:C) RNA ligand stimulation (By similarity). {ECO:0000250|UniProtKB:Q80UF7, ECO:0000269|PubMed:21695056}
Tissue Location	Ubiquitously expressed but with higher levels in liver.

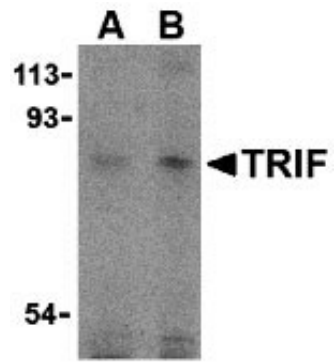
Background

TRIF Antibody: TRIF is a member of the Toll/interleukin-1 receptor (TIR) family, a group of proteins that include the Toll-like receptors (TLRs). TLRs are signaling molecules that recognize different pathogen-associated molecular patterns (PAMPs) and serve as an important link between the innate and adaptive immune responses. TRIF, along with other molecules such as TIRP, TIRAP, and MyD88, serves as an adaptor protein to several of the TLR molecules. Following activation of TLR3 and TLR4, TRIF engages the kinase TBK1 and allows its subsequent activation of the interferon regulatory factor (IRF)-3. TRIF is also involved in the activation of TNF receptor associated factor (TRAF)-6, and ultimately the activation of NF-κB.

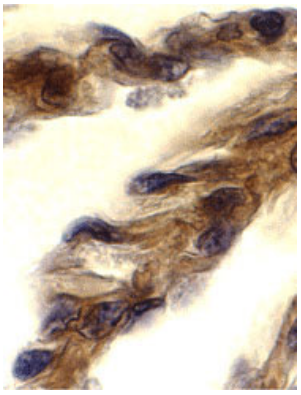
References

O'Neill LAJ, Fitzgerald FA, and Bowie AG. The Toll-IL-1 receptor adaptor family grows to five members. Trends in Imm. 2003; 24:286-9.
Vogel SN, Fitzgerald KA, and Fenton MJ. TLRs: differential adapter utilization by toll-like receptors mediates TLR-specific patterns of gene expression. Mol. Interv. 2003;3:466-77.
Takeda K, Kaisho T, and Akira S. Toll-like receptors. Annu. Rev. Immunol. 2003;21:335-76.
Janeway CA Jr and Medzhitov R. Innate immune recognition. Annu. Rev. Immunol. 2002;20:197-216.

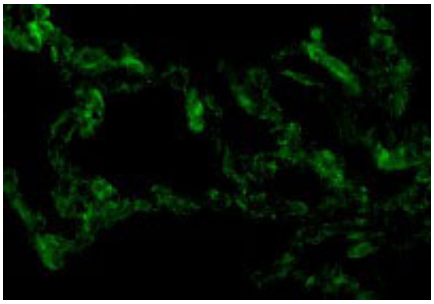
Images



Western blot analysis of TRIF in human lung cell lysates with TRIF antibody at (A) 2 and (B) 4 µg/mL.



Immunohistochemistry of TRIF in human lung tissue with TRIF antibody at 10 µg/mL.



Immunofluorescence of TRIF in Human Lung cells with TRIF antibody at 10 µg/mL.