

### **TICAM1 Blocking Peptide (N-term)**

Synthetic peptide Catalog # BP20485a

### **Specification**

### TICAM1 Blocking Peptide (N-term) - Product Information

**Primary Accession** 

**Q8IUC6** 

# TICAM1 Blocking Peptide (N-term) - Additional Information

Gene ID 148022

#### **Other Names**

TIR domain-containing adapter molecule 1, TICAM-1, Proline-rich, vinculin and TIR domain-containing protein B, Putative NF-kappa-B-activating protein 502H, Toll-interleukin-1 receptor domain-containing adapter protein inducing interferon beta, MyD88-3, TIR domain-containing adapter protein inducing IFN-beta, TICAM1, PRVTIRB, TRIF

### Target/Specificity

The synthetic peptide sequence is selected from aa 130-143 of Human TICAM1

#### **Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

### **Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

### TICAM1 Blocking Peptide (N-term) - 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:<a href="http://www.uniprot.org/citations/12471095" target="\_blank">12471095</a>, PubMed:<a href="http://www.uniprot.org/citations/12539043" target="\_blank">12539043</a>, PubMed:<a href="http://www.uniprot.org/citations/14739303" target="\_blank">14739303</a>, PubMed:<a href="http://www.uniprot.org/citations/28747347" target="\_blank">28747347</a>). Ligand binding to these receptors results in TRIF recruitment through its TIR domain (PubMed:<a href="http://www.uniprot.org/citations/12471095" target="\_blank">12471095</a>, PubMed:<a href="http://www.uniprot.org/citations/12539043" target=" blank">12539043</a>, PubMed:<a href="http://www.uniprot.org/citations/14739303"



target="\_blank">14739303</a>). 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:<a href="http://www.uniprot.org/citations/12471095" target="\_blank">12471095</a>, PubMed:<a href="http://www.uniprot.org/citations/12539043" target="\_blank">12539043</a>, PubMed:<a href="http://www.uniprot.org/citations/14739303" target="\_blank">14739303</a>). 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:<a href="http://www.uniprot.org/citations/25636800" target="\_blank">25636800</a>). 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.

# TICAM1 Blocking Peptide (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

# • Blocking Peptides

TICAM1 Blocking Peptide (N-term) - Images

# TICAM1 Blocking Peptide (N-term) - Background

Involved in innate immunity against invading pathogens. Adapter used by TLR3 and TLR4 (through TICAM2) to mediate NF-kappa-B and interferon-regulatory factor (IRF) activation, and to induce apoptosis. Ligand binding to these receptors results in TRIF recruitment through its TIR domain. 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.

# TICAM1 Blocking Peptide (N-term) - References

Bin L.-H., et al. J. Biol. Chem. 278:24526-24532(2003). Yamamoto M., et al. J. Immunol. 169:6668-6672(2002). Oshiumi H., et al. Nat. Immunol. 4:161-167(2003). Nakajima T., et al. Immunogenetics 60:727-735(2008). Matsuda A., et al. Oncogene 22:3307-3318(2003).