

**TBK1 (aa514-527) Antibody (C or N-Term)**  
Peptide-affinity purified goat antibody  
Catalog # AF3600a**Specification**

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**TBK1 (aa514-527) Antibody (C or N-Term) - Product Information**

Application	WB
Primary Accession	<a href="#">O9UHD2</a>
Other Accession	<a href="#">NP_037386.1</a> , <a href="#">29110</a>
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	83642

**TBK1 (aa514-527) Antibody (C or N-Term) - Additional Information**

Gene ID 29110

**Other Names**

Serine/threonine-protein kinase TBK1, 2.7.11.1, NF-kappa-B-activating kinase, T2K, TANK-binding kinase 1, TBK1, NAK

**Format**

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

TBK1 (aa514-527) Antibody (C or N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

**TBK1 (aa514-527) Antibody (C or N-Term) - Protein Information**

**Name** TBK1 {ECO:0000303|PubMed:10581243, ECO:0000312|HGNC:HGNC:11584}

**Function**

Serine/threonine kinase that plays an essential role in regulating inflammatory responses to foreign agents (PubMed: [10581243](http://www.uniprot.org/citations/10581243), PubMed: [11839743](http://www.uniprot.org/citations/11839743), PubMed: [12692549](http://www.uniprot.org/citations/12692549), PubMed: [12702806](http://www.uniprot.org/citations/12702806), PubMed: [14703513](http://www.uniprot.org/citations/14703513), PubMed: [15367631](http://www.uniprot.org/citations/15367631))

target="\_blank">15367631</a>, PubMed:<a href="http://www.uniprot.org/citations/15485837" target="\_blank">15485837</a>, PubMed:<a href="http://www.uniprot.org/citations/18583960" target="\_blank">18583960</a>, PubMed:<a href="http://www.uniprot.org/citations/21138416" target="\_blank">21138416</a>, PubMed:<a href="http://www.uniprot.org/citations/23453971" target="\_blank">23453971</a>, PubMed:<a href="http://www.uniprot.org/citations/23453972" target="\_blank">23453972</a>, PubMed:<a href="http://www.uniprot.org/citations/23746807" target="\_blank">23746807</a>, PubMed:<a href="http://www.uniprot.org/citations/25636800" target="\_blank">25636800</a>, PubMed:<a href="http://www.uniprot.org/citations/26611359" target="\_blank">26611359</a>, PubMed:<a href="http://www.uniprot.org/citations/32404352" target="\_blank">32404352</a>). Following activation of toll-like receptors by viral or bacterial components, associates with TRAF3 and TANK and phosphorylates interferon regulatory factors (IRFs) IRF3 and IRF7 as well as DDX3X (PubMed:<a href="http://www.uniprot.org/citations/12692549" target="\_blank">12692549</a>, PubMed:<a href="http://www.uniprot.org/citations/12702806" target="\_blank">12702806</a>, PubMed:<a href="http://www.uniprot.org/citations/14703513" target="\_blank">14703513</a>, PubMed:<a href="http://www.uniprot.org/citations/15367631" target="\_blank">15367631</a>, PubMed:<a href="http://www.uniprot.org/citations/18583960" target="\_blank">18583960</a>, PubMed:<a href="http://www.uniprot.org/citations/25636800" target="\_blank">25636800</a>). This activity allows subsequent homodimerization and nuclear translocation of the IRFs leading to transcriptional activation of pro-inflammatory and antiviral genes including IFNA and IFNB (PubMed:<a href="http://www.uniprot.org/citations/12702806" target="\_blank">12702806</a>, PubMed:<a href="http://www.uniprot.org/citations/15367631" target="\_blank">15367631</a>, PubMed:<a href="http://www.uniprot.org/citations/25636800" target="\_blank">25636800</a>, PubMed:<a href="http://www.uniprot.org/citations/32972995" target="\_blank">32972995</a>). In order to establish such an antiviral state, TBK1 form several different complexes whose composition depends on the type of cell and cellular stimuli (PubMed:<a href="http://www.uniprot.org/citations/23453971" target="\_blank">23453971</a>, PubMed:<a href="http://www.uniprot.org/citations/23453972" target="\_blank">23453972</a>, PubMed:<a href="http://www.uniprot.org/citations/23746807" target="\_blank">23746807</a>). Plays a key role in IRF3 activation: acts by first phosphorylating innate adapter proteins MAVS, STING1 and TICAM1 on their pLxIS motif, leading to recruitment of IRF3, thereby licensing IRF3 for phosphorylation by TBK1 (PubMed:<a href="http://www.uniprot.org/citations/25636800" target="\_blank">25636800</a>, PubMed:<a href="http://www.uniprot.org/citations/30842653" target="\_blank">30842653</a>). Phosphorylated IRF3 dissociates from the adapter proteins, dimerizes, and then enters the nucleus to induce expression of interferons (PubMed:<a href="http://www.uniprot.org/citations/25636800" target="\_blank">25636800</a>). Thus, several scaffolding molecules including FADD, TRADD, MAVS, AZI2, TANK or TBKBP1/SINTBAD can be recruited to the TBK1-containing-complexes (PubMed:<a href="http://www.uniprot.org/citations/21931631" target="\_blank">21931631</a>). Under particular conditions, functions as a NF-kappa-B effector by phosphorylating NF-kappa-B inhibitor alpha/NFKBIA, IKKB or RELA to translocate NF-Kappa-B to the nucleus (PubMed:<a href="http://www.uniprot.org/citations/10783893" target="\_blank">10783893</a>, PubMed:<a href="http://www.uniprot.org/citations/15489227" target="\_blank">15489227</a>). Restricts bacterial proliferation by phosphorylating the autophagy receptor OPTN/Optineurin on 'Ser-177', thus enhancing LC3 binding affinity and antibacterial autophagy (PubMed:<a href="http://www.uniprot.org/citations/21617041" target="\_blank">21617041</a>). Phosphorylates SMCR8 component of the C9orf72-SMCR8 complex, promoting autophagosome maturation (PubMed:<a href="http://www.uniprot.org/citations/27103069" target="\_blank">27103069</a>). Phosphorylates ATG8 proteins MAP1LC3C and GABARAPL2, thereby preventing their delipidation and premature removal from nascent autophagosomes (PubMed:<a href="http://www.uniprot.org/citations/31709703" target="\_blank">31709703</a>). Phosphorylates and activates AKT1 (PubMed:<a href="http://www.uniprot.org/citations/21464307" target="\_blank">21464307</a>). Seems to play a role in energy balance regulation by sustaining a state of chronic, low-grade inflammation in obesity, which leads to a negative impact on insulin sensitivity (By similarity). Attenuates retroviral budding by phosphorylating the endosomal sorting complex required for transport-I (ESCRT-I) subunit VPS37C (PubMed:<a href="http://www.uniprot.org/citations/21270402" target="\_blank">21270402</a>).

Phosphorylates Borna disease virus (BDV) P protein (PubMed:<a href="http://www.uniprot.org/citations/16155125" target="\_blank">16155125</a>). Plays an essential role in the TLR3- and IFN-dependent control of herpes virus HSV-1 and HSV-2 infections in the central nervous system (PubMed:<a href="http://www.uniprot.org/citations/22851595" target="\_blank">22851595</a>). Acts both as a positive and negative regulator of the mTORC1 complex, depending on the context: activates mTORC1 in response to growth factors by catalyzing phosphorylation of MTOR, while it limits the mTORC1 complex by promoting phosphorylation of RPTOR (PubMed:<a href="http://www.uniprot.org/citations/29150432" target="\_blank">29150432</a>, PubMed:<a href="http://www.uniprot.org/citations/31530866" target="\_blank">31530866</a>).

#### Cellular Location

Cytoplasm. Note=Upon mitogen stimulation or triggering of the immune system, TBK1 is recruited to the exocyst by EXOC2.

#### Tissue Location

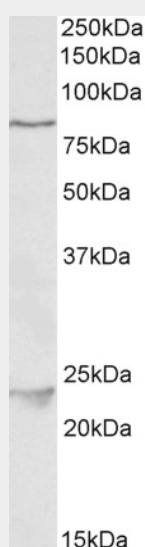
Ubiquitous with higher expression in testis. Expressed in the ganglion cells, nerve fiber layer and microvasculature of the retina.

### TBK1 (aa514-527) Antibody (C or N-Term) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### TBK1 (aa514-527) Antibody (C or N-Term) - Images



AF3600a (1 µg/ml) staining of HeLa lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

### TBK1 (aa514-527) Antibody (C or N-Term) - References

TAX1BP1 and A20 inhibit antiviral signaling by targeting TBK1-IKKi kinases. Parvatiyar K, Barber GN, Harhaj EW. J Biol Chem. 2010 May 14;285(20):14999-5009. PMID: 20304918