


## Product datasheet

### Anti-NAK/TBK1 antibody [EPR2867(2)-19] $\alpha$ b109735

KO **VALIDATED** Recombinant RabMAb<sup>®</sup>

★★★★★ [1 Abreviews](#) [17 References](#) [8 Images](#)

#### Overview

Product name	Anti-NAK/TBK1 antibody [EPR2867(2)-19]
Description	Rabbit monoclonal [EPR2867(2)-19] to NAK/TBK1
Host species	Rabbit
Tested applications	<b>Suitable for:</b> WB, IHC-P, IP <b>Unsuitable for:</b> Flow Cyt
Species reactivity	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Rat 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	HeLa, U937, HepG2, and 293T cell lysates, Human testis tissue, HeLa cells
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

#### Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR2867(2)-19
Isotype	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab109735 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

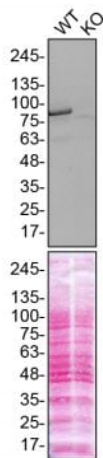
Application	Abreviews	Notes
WB	★★★★★ (1)	1/1000 - 1/10000. Detects a band of approximately 84 kDa (predicted molecular weight: 84 kDa). <b>For unpurified use at 1/1000 - 1/2000.</b>
IHC-P		1/800. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. See <b><u>IHC antigen retrieval protocols</u></b> . <b>For unpurified use at 1/400.</b>
IP		1/30.

**Application notes** Is unsuitable for Flow Cyt.

## Target

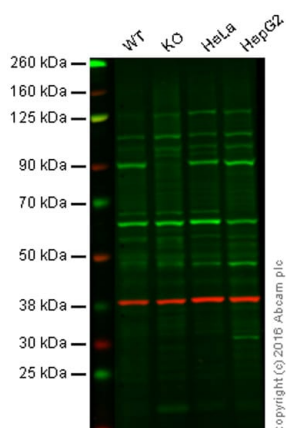
<b>Function</b>	Serine/threonine protein involved in the signaling cascade converging to the activation of the transcription factor NF-kappa-B. May function as an IKK kinase, playing an essential role in the transcription of a subset of TNF-alpha-induced genes. Also mediates production of RANTES/CCL5 and interferon-beta/IFNB1. Has a pivotal role in the innate immune response. Phosphorylates Borna disease virus (BDV) P protein. Phosphorylates and activates IRF3 and IRF7 and allows their nuclear localization. This leads to production of alpha/beta interferons and the development of a cellular antiviral state. It also seems to be a central factor in the induction of the antiviral interferon response. Inhibition of its interaction with IRF3, due to HCV NS3 binding or BDV P protein seems to be one mechanism of inhibition of the innate immune responses of hepatitis C virus (HCV) infection or Borna disease virus infection respectively.
<b>Tissue specificity</b>	Ubiquitous with higher expression in testis.
<b>Sequence similarities</b>	Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. Ikappa-B kinase subfamily. Contains 1 protein kinase domain.
<b>Cellular localization</b>	Cytoplasm.

## Images



Western blot - Anti-NAK/TBK1 antibody  
[EPR2867(2)-19] (ab109735)

ab109735 was shown to react with TBK1 in wild-type U2OSn cells in Western blot with loss of signal observed in a TBK1 knockout cell line. Wild-type U2OSn and TBK1 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab109735 overnight at 4 °C at a 1/10000 dilution. Blots were incubated with goat anti-rabbit HRP secondary antibodies at 1/5000 before imaging. These data were provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.



Western blot - Anti-NAK/TBK1 antibody  
[EPR2867(2)-19] (ab109735)

**Lane 1:** Wild-type HAP1 cell lysate (20 µg)

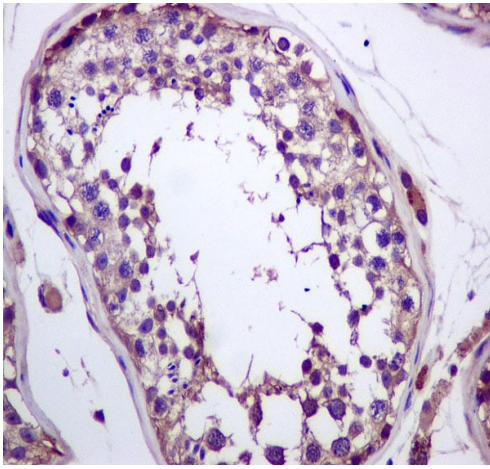
**Lane 2:** NAK/TBK1 knockout HAP1 cell lysate (20 µg)

**Lane 3:** HeLa cell lysate (20 µg)

**Lane 4:** HepG2 cell lysate (20 µg)

**Lanes 1 - 4:** Merged signal (red and green). Green - ab109735 observed at 90 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

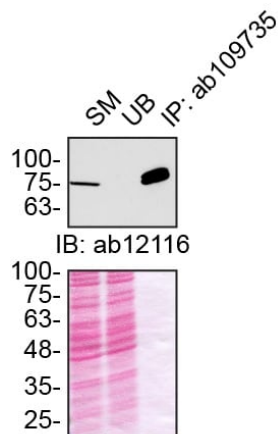
ab109735 was shown to recognize NAK/TBK1 when NAK/TBK1 knockout samples were used, along with additional cross-reactive bands. Wild-type and NAK/TBK1 knockout samples were subjected to SDS-PAGE. ab109735 and **ab8245** (loading control to GAPDH) were diluted at 1/1000 and 1/10 000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/10 000 dilution for 1 h at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NAK/TBK1 antibody [EPR2867(2)-19] (ab109735)

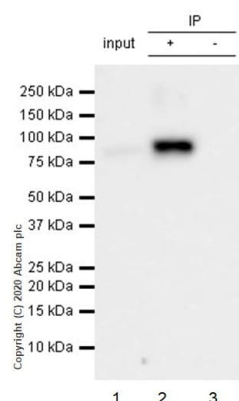
Immunohistochemical analysis of paraffin-embedded human testis tissue using ab109735 at a dilution of 1/250.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-NAK/TBK1 antibody [EPR2867(2)-19] (ab109735)

Immunoprecipitation of TBK1 in HeLa cells. Lysates were prepared and immunoprecipitation was performed using 1.0  $\mu$ g of ab109735 pre-coupled to prot.A-Sepharose beads. Samples were washed and processed for western blot with **ab12116** at 1 in 2000. This data was kindly provided by the YCharOS Inc., an open science company with the mission of characterizing every commercially available antibody reagent. Abcam are working with YCharOS to support their mission of antibody characterisation using knock out cell lines.



Immunoprecipitation - Anti-NAK/TBK1 antibody  
[EPR2867(2)-19] (ab109735)

Purified ab109735 at 1/30 dilution (2µg) immunoprecipitating NAK/TBK1 in HeLa whole cell lysate.

Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg

Lane 2 (+): ab109735 + HeLa whole cell lysate.

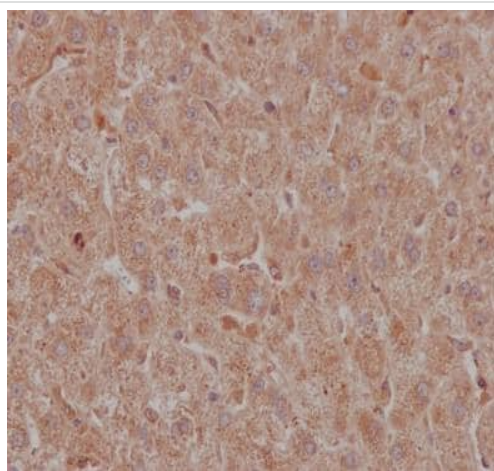
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab109735 in HeLa whole cell lysate.

VeriBlot for IP Detection Reagent (HRP) (**ab131366**) (1/5000 dilution) was used for Western blotting.

Blocking Buffer and concentration: 5% NFDm/TBST.

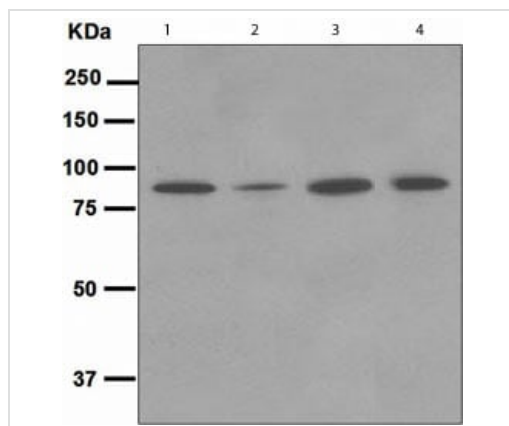
Diluting buffer and concentration: 5% NFDm/TBST.

Observed band size: 84 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NAK/TBK1 antibody  
[EPR2867(2)-19] (ab109735)

ab109735 staining NAK/TBK1 in Human liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed and paraffin-embedded, antigen retrieval was by heat mediation in Tris/EDTA buffer pH9. Samples were incubated with primary antibody (1/800). An undiluted HRP-conjugated anti-rabbit IgG was used as the secondary antibody. Tissue counterstained with Hematoxylin.



Western blot - Anti-NAK/TBK1 antibody  
[EPR2867(2)-19] (ab109735)

**All lanes :** Anti-NAK/TBK1 antibody [EPR2867(2)-19] (ab109735)  
at 1/1000 dilution

**Lane 1 :** HeLa cell lysate

**Lane 2 :** U937 cell lysate

**Lane 3 :** HepG2 cell lysate

**Lane 4 :** 293T cell lysate

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 84 kDa

#### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-NAK/TBK1 antibody [EPR2867(2)-19]  
(ab109735)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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