

## **IKK epsilon Antibody** Catalog # ASC10120

### **Specification**

---

#### **IKK epsilon Antibody - Product Information**

Application	<b>WB, IHC</b>
Primary Accession	<a href="#">Q14164</a>
Other Accession	<a href="#">AF241789</a> , <a href="#">7288877</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Isotype	<b>IgG</b>
Calculated MW	<b>80 kDa KDa</b>
Application Notes	<b>IKK epsilon antibody can be used for detection of IKK epsilon by Western blot at 1 µg/mL. An 80 kDa band should be detected. Antibody can also be used for immunohistochemistry starting at 10 µg/mL.</b>

#### **IKK epsilon Antibody - Additional Information**

Gene ID **9641**

##### **Other Names**

IKK epsilon Antibody: IKKE, IKKI, IKK-E, IKK-i, IKKE, KIAA0151, Inhibitor of nuclear factor kappa-B kinase subunit epsilon, Inducible I kappa-B kinase, I-kappa-B kinase epsilon, inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase epsilon

##### **Target/Specificity**

IKBKE; It has no cross response to IKKa, IKKb, or IKKy.

##### **Reconstitution & Storage**

IKK epsilon antibody can be stored at 4°C for three months and -20°C, 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**

IKK epsilon Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

#### **IKK epsilon Antibody - Protein Information**

**Name** IKBKE

**Synonyms** IKKE, IKKI, KIAA0151

##### **Function**

Serine/threonine kinase that plays an essential role in regulating inflammatory responses to viral

infection, through the activation of the type I IFN, NF-kappa-B and STAT signaling. Also involved in TNFA and inflammatory cytokines, like Interleukin-1, signaling. Following activation of viral RNA sensors, such as RIG-I- like receptors, associates with DDX3X and phosphorylates interferon regulatory factors (IRFs), IRF3 and IRF7, as well as DDX3X. This activity allows subsequent homodimerization and nuclear translocation of the IRF3 leading to transcriptional activation of pro-inflammatory and antiviral genes including IFNB. In order to establish such an antiviral state, IKBKE forms several different complexes whose composition depends on the type of cell and cellular stimuli. Thus, several scaffolding molecules including IPS1/MAVS, TANK, AZI2/NAP1 or TBKBP1/SINTBAD can be recruited to the IKBKE-containing-complexes. Activated by polyubiquitination in response to TNFA and interleukin-1, regulates the NF-kappa-B signaling pathway through, at least, the phosphorylation of CYLD. Phosphorylates inhibitors of NF-kappa-B thus leading to the dissociation of the inhibitor/NF-kappa-B complex and ultimately the degradation of the inhibitor. In addition, is also required for the induction of a subset of ISGs which displays antiviral activity, may be through the phosphorylation of STAT1 at 'Ser-708'. Phosphorylation of STAT1 at 'Ser-708' seems also to promote the assembly and DNA binding of ISGF3 (STAT1:STAT2:IRF9) complexes compared to GAF (STAT1:STAT1) complexes, in this way regulating the balance between type I and type II IFN responses. Protects cells against DNA damage-induced cell death. Also plays an important 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. Phosphorylates AKT1.

#### **Cellular Location**

Cytoplasm. Nucleus. Nucleus, PML body. Note=Targeting to PML nuclear bodies upon DNA damage is TOPORS-dependent (PubMed:20188669) Located diffusely throughout the cytoplasm but locates to punctate cytoplasmic bodies when coexpressed with TRIM6 (PubMed:24882218)

#### **Tissue Location**

Highly expressed in spleen followed by thymus, peripheral blood leukocytes, pancreas, placenta. Weakly expressed in lung, kidney, prostate, ovary and colon

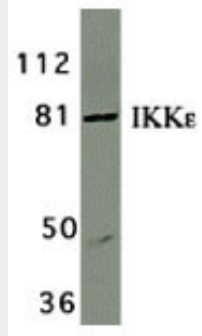
### **IKK epsilon Antibody - Protocols**

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

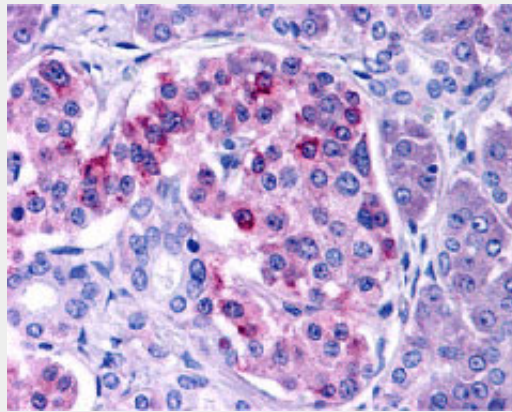
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **IKK epsilon Antibody - Images**





Western blot analysis of IKK epsilon in Jurkat whole cell lysate with IKK epsilon/IKK-i antibody at 1  $\mu$ g/mL.



Immunohistochemistry of IKK epsilon in human pancreas tissue with IKK epsilon antibody at 10  $\mu$ g/mL.

### **IKK epsilon Antibody - Background**

IKK epsilon Antibody: Nuclear factor kappa B (NF- $\kappa$ B) is a ubiquitous transcription factor and an essential mediator of gene expression during activation of immune and inflammatory responses. NF- $\kappa$ B mediates the expression of a great variety of genes in response to extracellular stimuli. NF- $\kappa$ B is associated with I $\kappa$ B proteins in the cell cytoplasm, which inhibit NF- $\kappa$ B activity. I $\kappa$ B is phosphorylated by I $\kappa$ B kinase (IKK) complex that contains IKK $\alpha$ , IKK $\beta$ , and IKK $\gamma$ . A novel molecule in the IKK complex was recently identified and designated IKK $\epsilon$ /IKK-i. IKK epsilon is required for the activation of NF- $\kappa$ B by PMA and T cell receptors but not by TNF $\alpha$  and IL-1. IKK $\epsilon$ /IKK-i message is expressed in a variety of tissues and is inducible by TNF $\alpha$ , IL-1, and LPS.

### **IKK epsilon Antibody - References**

Peters RT, Liao SM, Maniatis T. IKK epsilon is part of a novel PMA-inducible I $\kappa$ B kinase complex. *Mol Cell* 2000;5(3):513-22  
Shimada T, Kawai T, Takeda K, Matsumoto M, Inoue J, Tatsumi Y, Kanamaru A, Akira S. IKK-i, a novel lipopolysaccharide-inducible kinase that is related to I $\kappa$ B kinases. *Int Immunol* 1999;11(8):1357-62 (WD0101)