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Recombinant Anti-IKK epsilon Rabbit mAb

Catalog # AP95246

Product Information

Application	WB, IHC, FC, IF/IC
Primary Accession	Q14164
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal
Calculated MW	80462

Additional Information

Gene ID	9641
Other Names	IKKE; IKKI; KIAA0151; Inhibitor of nuclear factor kappa-B kinase subunit epsilon; I-kappa-B kinase epsilon; IKK-E; IKK-epsilon; IkBKE; Inducible I kappa-B kinase; IKK-i
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within human IKK epsilon protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IF/IC~~N/A
Format	Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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 (PubMed:16840782, PubMed:18583960, PubMed:19153231, PubMed:19481526, PubMed:21138416, PubMed:22532683, PubMed:23453969, PubMed:23478265, PubMed:24882218, PubMed:32268090). Also involved in TNFA and inflammatory cytokines, like Interleukin-1, signaling (PubMed:18583960, PubMed:19153231, PubMed:22532683, PubMed:23478265). 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 (PubMed:18583960, PubMed:19153231, PubMed:22532683, PubMed:23478265). This activity allows subsequent homodimerization and nuclear translocation of the IRF3 leading to transcriptional activation of

pro-inflammatory and antiviral genes including IFNB (PubMed:18583960, PubMed:19153231, PubMed:22532683, PubMed:23478265). In order to establish such an antiviral state, IKBKE forms several different complexes whose composition depends on the type of cell and cellular stimuli (PubMed:17568778). Thus, several scaffolding molecules including IPS1/MAVS, TANK, AZI2/NAP1 or TBKBP1/SINTBAD can be recruited to the IKBKE-containing-complexes (PubMed:17568778). 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' (By similarity). Phosphorylation of STAT1 at 'Ser-708' also seems 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 (By similarity). Activated by polyubiquitination in response to TNFA and interleukin-1, regulates the NF-kappa-B signaling pathway via the phosphorylation of CYLD, NFKBIA and p65/RELA (PubMed:16840782, PubMed:19481526, PubMed:21138416, PubMed:23453969). Activates NF-kappa- B by mediating phosphorylation and inactivation of CYLD (PubMed:19481526). Phosphorylates inhibitors of NF-kappa-B, such as NFKBIA, thus leading to the dissociation of the inhibitor/NF-kappa-B complex and ultimately the degradation of the inhibitor (PubMed:10882136). Also activates NF-kappa-B signaling by mediating phosphorylation and activation of STING1 (PubMed:32268090, PubMed:39262777, PubMed:40973797). Protects cells against DNA damage-induced cell death (PubMed:20188669). 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 (By similarity). Phosphorylates AKT1 (PubMed:21464307).

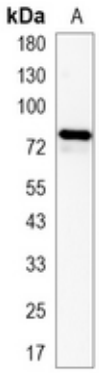
Cellular Location

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

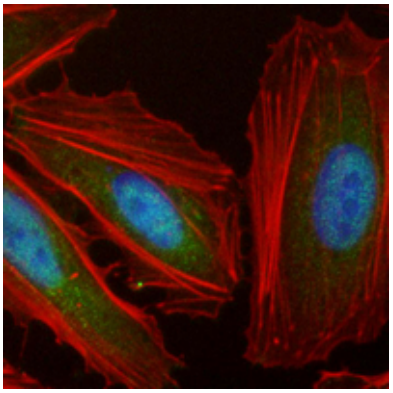
Highly expressed in spleen followed by thymus, peripheral blood leukocytes, pancreas, placenta. Weakly expressed in lung, kidney, prostate, ovary and colon

Images



Western blot analysis of IKK epsilon expression in Raji (A) whole cell lysates. (Predicted band size: 80 kD; Observed band size: 80 kD)

Immunofluorescent analysis of IKK epsilon staining in Raji cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells



were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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