

<b>Product name:</b>	IKK beta (11A19) Rabbit Monoclonal Antibody
<b>Cat number:</b>	MABN12473
<b>Conjugate:</b>	Unconjugated
<b>Size:</b>	100µL
<b>Clone:</b>	Monoclonal
<b>Concentration:</b>	1mg/ml
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Immunogen:</b>	A synthetic peptide of human IKK beta
<b>Reactivity:</b>	Human, Mouse
<b>Applications:</b>	WB 1:1000-1:2000, IP 1:20-1:50
<b>Molecular Weight:</b>	87kDa
<b>Purification:</b>	Affinity purification
<b>Form:</b>	Liquid
<b>Buffer:</b>	Supplied in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% New type preservative N and 0.05% BSA.
<b>Storage:</b>	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

**Background:**

The NF- $\kappa$ B/Rel transcription factors are present in the cytosol in an inactive state, complexed with the inhibitory I $\kappa$ B proteins (1-3). Most agents that activate NF- $\kappa$ B do so through a common pathway based on phosphorylation-induced, proteasome-mediated degradation of I $\kappa$ B (3-7). The key regulatory step in this pathway involves activation of a high molecular weight I $\kappa$ B kinase (IKK) complex whose catalysis is generally carried out by three tightly associated IKK subunits. Serine kinase that plays an essential role in the NF-kappa-B signaling pathway which is activated by multiple stimuli such as inflammatory cytokines, bacterial or viral products, DNA damages or other cellular stresses (PubMed:30337470). Acts as part of the canonical IKK complex in the conventional pathway of NF-kappa-B activation. Phosphorylates inhibitors of NF-kappa-B on 2 critical serine residues. These modifications allow polyubiquitination of the inhibitors and subsequent degradation by the proteasome. In turn, free NF-kappa-B is translocated into the nucleus and activates the transcription of hundreds of genes involved in immune response, growth control, or protection against apoptosis. In addition to the NF-kappa-B inhibitors, phosphorylates several other components of the signaling pathway including NEMO/I $\kappa$ BKG, NF-kappa-B subunits RELA and NF $\kappa$ B1, as well as IKK-related kinases TBK1 and I $\kappa$ BKE (PubMed:11297557, PubMed:20410276). IKK-related kinase phosphorylations may prevent the overproduction of inflammatory mediators since they exert a negative regulation on canonical IKKs. Phosphorylates FOXO3, mediating the TNF- dependent inactivation of this pro-apoptotic transcription factor (PubMed:15084260). Also phosphorylates other substrates including NCOA3, BCL10 and IRS1 (PubMed:17213322). Within the nucleus, acts as an adapter protein for NF $\kappa$ BIA degradation in UV-induced NF-kappa-B activation (PubMed:11297557). Phosphorylates RIPK1 at 'Ser-25' which represses its kinase activity and consequently prevents TNF-mediated RIPK1-dependent cell death (By similarity). Phosphorylates the C- terminus of IRF5, stimulating IRF5 homodimerization and translocation into the nucleus (PubMed:25326418).