

## Anti-IκBα (Ser-32/Ser-36), Phosphospecific Antibody

Catalog # AN1815

#### **Specification**

# Anti-IκBα (Ser-32/Ser-36), Phosphospecific Antibody - Product Information

Application WB
Primary Accession P25963
Reactivity Bovine
Host Mouse

Clonality Mouse Monoclonal

Isotype IgG1
Calculated MW 35609

### Anti-IκBα (Ser-32/Ser-36), Phosphospecific Antibody - Additional Information

Gene ID 4792

**Other Names** 

IkB, MAD3, IkappaBalpha, NFkappaB inhibitor IkBa

#### Target/Specificity

The NF- $\kappa$ B/Rel transcription factors are present in the cytosol in an inactive state complexed with the inhibitory IkB proteins. Activation of IkB $\alpha$  occurs through both serine and tyrosine phosphorylation events. Activation through phosphorylation at Ser-32 and Ser-36 is followed by proteasome-mediated degradation, resulting in the release and nuclear translocation of active NF- $\kappa$ B. This pathway of IkB $\alpha$  regulation occurs in response to various NF- $\kappa$ B-activating agents, such as TNF $\alpha$ , interleukins, LPS, and irradiation. An alternative pathway for IkB $\alpha$  regulation occurs through tyrosine phosphorylation of Tyr-42 and Tyr-305. Tyr-42 is phosphorylated in response to oxidative stress and growth factors. This phosphorylation can lead to degradation of IkB $\alpha$  and NF- $\kappa$ B-activation. In contrast, Tyr-305 phosphorylation by c-AbI has been implicated in IkB $\alpha$  nuclear translocation and inhibition of NF- $\kappa$ B-activation. Thus, tyrosine phosphorylation of IkB $\alpha$  may be an important regulatory mechanism in NF- $\kappa$ B signaling.

#### **Dilution**

WB~~1:1000

#### **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**

Anti-IkB $\alpha$  (Ser-32/Ser-36), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

#### Shipping

Blue Ice

#### Anti-IκBα (Ser-32/Ser-36), Phosphospecific Antibody - Protocols

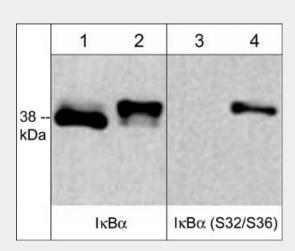




Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Anti-IκBα (Ser-32/Ser-36), Phosphospecific Antibody - Images



Western blot analysis of Jurkat cells untreated (lanes 1 & 3) or treated with TNF $\alpha$  (1 nM). The blots were probed with anti-IkB $\alpha$  (lanes 1 & 2) or anti-IkB $\alpha$  (Ser-32/Ser-36) (lanes 3 & 4).

# Anti-IκBα (Ser-32/Ser-36), Phosphospecific Antibody - 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. Activation of I $\kappa$ B $\alpha$  occurs through both serine and tyrosine phosphorylation events. Activation through phosphorylation at Ser-32 and Ser-36 is followed by proteasome-mediated degradation, resulting in the release and nuclear translocation of active NF- $\kappa$ B. This pathway of I $\kappa$ B $\alpha$  regulation occurs in response to various NF- $\kappa$ B-activating agents, such as TNF $\alpha$ , interleukins, LPS, and irradiation. An alternative pathway for I $\kappa$ B $\alpha$  regulation occurs through tyrosine phosphorylation of Tyr-42 and Tyr-305. Tyr-42 is phosphorylated in response to oxidative stress and growth factors. This phosphorylation can lead to degradation of I $\kappa$ B $\alpha$  and NF- $\kappa$ B-activation. In contrast, Tyr-305 phosphorylation by c-Abl has been implicated in I $\kappa$ B $\alpha$  nuclear translocation and inhibition of NF- $\kappa$ B-activation. Thus, tyrosine phosphorylation of I $\kappa$ B $\alpha$  may be an important regulatory mechanism in NF- $\kappa$ B signaling.