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Anti-IκBα (Tyr-42), Phosphospecific Antibody
Catalog # AN1816

Specification

Anti-IκBα (Tyr-42), Phosphospecific Antibody - Product Information

Application	**WB**
Primary Accession	P25963
Reactivity	**Bovine**
Host	**Rabbit**
Clonality	**Rabbit Polyclonal**
Isotype	**IgG**
Calculated MW	**35609**

Anti-IκBα (Tyr-42), Phosphospecific Antibody - Additional Information

Gene ID	**4792**

Other Names
IkB, MAD3, IkappaBalpha, NFkappaB inhibitor IkBa

Target/Specificity
The NF-κB/Rel transcription factors are present in the cytosol in an inactive state complexed with the inhibitory IκB proteins. Activation of IκBα 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-κB. This pathway of IκBα regulation occurs in response to various NF-κB-activating agents, such as TNFα, interleukins, LPS, and irradiation. An alternative pathway for IκBα 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 IκBα and NF-κB-activation. In contrast, Tyr-305 phosphorylation by c-Abl has been implicated in IκBα nuclear translocation and inhibition of NF-κB-activation. Thus, tyrosine phosphorylation of IκBα may be an important regulatory mechanism in NF-κB 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-IκBα (Tyr-42), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

Anti-IκBα (Tyr-42), Phosphospecific Antibody - Protocols

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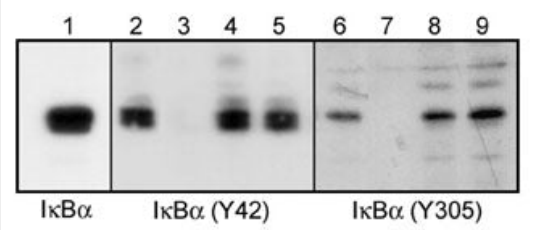
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-IκBα (Tyr-42), Phosphospecific Antibody - Images



Western blot analysis of A431 cells treated with pervanadate (1 mM) for 30 min. Blots were probed with anti-IκBα (lane 1), anti-IκBα (Tyr-42) (IP1031; lanes 2-5), or anti-IκBα (Tyr-305) (IP1041; lanes 6-9). In some lanes, the antibodies were used in the absence (lane 2 & 6) or presence of IκBα (Tyr-42) (lane 3 & 8) or IκBα (Tyr-305) (lane 4 & 7) blocking peptides, or BSA conjugated to phospho-tyrosine (lane 5 & 9).

Anti-IκBα (Tyr-42), Phosphospecific Antibody - Background

The NF-κB/Rel transcription factors are present in the cytosol in an inactive state complexed with the inhibitory IκB proteins. Activation of IκBα 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-κB. This pathway of IκBα regulation occurs in response to various NF-κB-activating agents, such as TNFα, interleukins, LPS, and irradiation. An alternative pathway for IκBα 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 IκBα and NF-κB-activation. In contrast, Tyr-305 phosphorylation by c-Abl has been implicated in IκBα nuclear translocation and inhibition of NF-κB-activation. Thus, tyrosine phosphorylation of IκBα may be an important regulatory mechanism in NF-κB signaling.