

Anti-IkB α (Tyr-42), Phosphospecific Antibody
Catalog # AN1816**Specification****Anti-IkB α (Tyr-42), Phosphospecific Antibody - Product Information**

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

Anti-IkB α (Tyr-42), Phosphospecific Antibody - Additional InformationGene ID **4792****Other Names**

IkB, MAD3, IkappaBalpha, NFkappaB inhibitor IkBa

Target/Specificity

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

Shipping

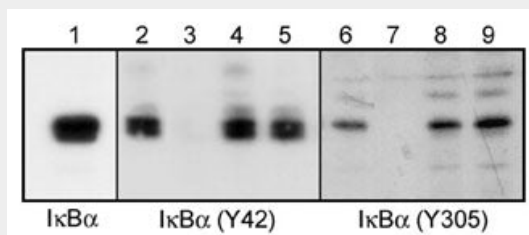
Blue Ice

Anti-IkB α (Tyr-42), Phosphospecific 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](#)

Anti-IkB α (Tyr-42), Phosphospecific Antibody - Images



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

Anti-IkB α (Tyr-42), Phosphospecific Antibody - Background

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