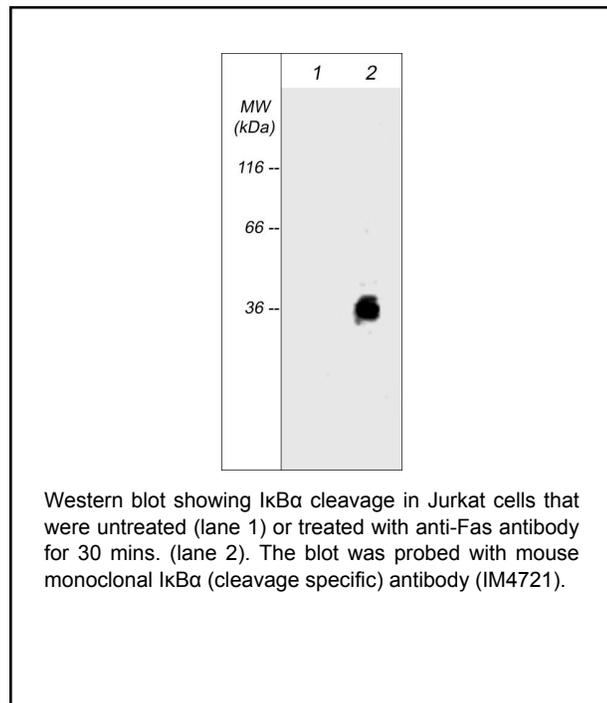


Background

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. Alternatively, Tyr-42 phosphorylation in response to oxidative stress and growth factors leads to degradation of IκBα and increased NF-κB-activation. In contrast, Tyr-305 phosphorylation by c-Abl has been implicated in IκBα nuclear translocation and inhibition of NF-κB-activation. In addition, IκBα can be cleaved by caspases during apoptosis to produce an amino-terminal truncated IκBα (DN-IκBα). The DN-IκBα is resistant to degradation in response to inducers of NF-κB and acts as a dominant inhibitory molecule that suppresses NF-κB activity during apoptosis.

Background References

Barkett, M. et al. (1997) J Biol Chem. 272: 29419.
 Reuther, J.Y. & Baldwin, Jr., A.S. (1999) J Biol Chem. 274: 20664.
 Waris et al. (2003) J Biol Chem 278(42):40778.



Applications

WB 1:500

Species Reactivity

Hu, Rt, Ms

Specificity

This antibody detects the 36 kDa* cleavage product of IκBα on SDS-PAGE immunoblots of human Jurkat cells treated with anti-Fas antibody for 30 mins. The antibody can be used to identify IκBα dominant inhibitory activity during apoptosis.

End user should determine optimal dilution for their particular applications and experiments.
 Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Isotype: IgG1

Immunogen

Uniprot ID: P25963

Clone 5D1623 was generated from the caspase-3 mediated cleavage site of human IκBα. This sequence is well conserved in rat and mouse IκBα.

Buffer and Storage

Mouse monoclonal purified with protein G chromatography is supplied in 100μl phosphate-buffered saline containing 0.05% BSA and 0.05% sodium azide. Store at 4°C, stable for 6 months. For long term storage, aliquot and store at -20°C.

Related Products

IM4681 IκBα Mouse Monoclonal
 IP1861 IκBα (C-terminus) Rabbit Polyclonal
 IM3741 IκBα (Ser-32/Ser-36), phospho-specific Mouse Monoclonal
 IP1031 IκBα (Tyr-42), phospho-specific Rabbit Polyclonal
 IP1041 IκBα (Tyr-305), phospho-specific Rabbit Polyclonal

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