

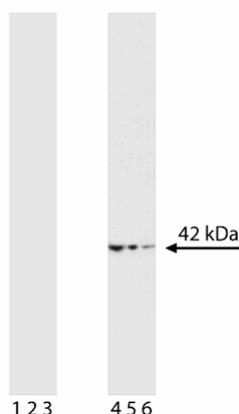
Technical Data Sheet

Purified Mouse Anti-Human IκBα (pS32/pS36)**Product Information**

Material Number:	551818
Size:	50 µg
Concentration:	0.5 mg/ml
Clone:	39A1413
Immunogen:	Phosphorylated Human IκBα aa. 32, 36
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

NF-κB is a transcription factor which is a member of the mammalian NF-κB/Rel family of proteins. Members of this family are involved in the regulation of cell proliferation, immune function, as well as development. NF-κB is normally found in the cytoplasm and remains in an inactive state by its association with an inhibitory protein, IκB. Stimulation of NF-κB by a variety of inducers causes the degradation of IκBs and translocation of NF-κB to the nucleus and activation of the target gene. IκBα is a member of the IκB family of proteins including IκBβ, IκBγ, IκBε, Bcl-3, and the precursors of NF-κB1 (p105), and NF-κB2 (p100). IκBα is the best characterized member of the family and has been shown to contain three different structural domains: an N-terminal region, an amino acid internal region containing ankyrin repeats, and a C-terminal region containing a PEST domain. In resting cells, IκBα binds to and maintains NF-κB in the cytoplasm by blocking the nuclear localization sequences of NF-κB. In the response to an extracellular signal, IκBα is phosphorylated and subsequently degraded via the ubiquitination-proteasome pathway, allowing NF-κB to translocate to the nucleus. Once in the nucleus, NF-κB can induce the transcription of IκBα thereby renewing the cycle so that IκBα can form a complex with NF-κB and maintains it in its cytoplasmic location. IκBα^{-/-} mice have been shown to die soon after birth and show an increased level of NF-κB activity. Furthermore, in Hodgekin's lymphoma (HL) a high constitutive level of NF-κB has been reported in samples in which clonal deleterious mutations were detected in the IκBα gene. The exact role that IκBα plays in the pathogenic process which leads to HL remains to be elucidated. IκBα migrates at ~42 kDa in SDS/PAGE, while the deduced molecular weight based upon its cDNA sequence is ~36 kDa (SWISS PROT Accession number P25963). The antibody specifically recognizes the phosphorylated form of human IκBα; it does not recognize the unphosphorylated form. A synthetic peptide containing phosphorylated serines at amino acid residues of 32 and 36 of human IκBα was used as the immunogen.



Western blot analysis of IκBα. Untreated (lanes 1-3) or TNF-α-treated (20 ng/ml for 10 minutes, lane 4-6) Jurkat cells were lysed and probed with anti-human IκBα (clone 39A1413, Cat. No. 551818) at concentrations of 2.0 (lanes 1,4), 1.0 (lanes 2,5), and 0.5 µg/ml (lanes 3,6). IκBα is identified as a band of ~42 kDa in the TNF-α treated Jurkat cells, but not in the untreated cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at 4°C.

Application Notes**Application**

Western blot	Routinely Tested
Immunoprecipitation	Reported

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Recommended Assay Procedure:

Applications include western blot analysis (0.5-2.0 µg/ml). Additional applications not tested at BD Biosciences Pharmingen include immunoprecipitation. Treatment of Jurkat T cells with TNF- α is recommended as a positive control.

Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

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