

## Product datasheet for **TA389149**

### Phospho-NFKBIA Mouse Antibody [Clone ID: 39A1413]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	39A1413
Applications:	IP, WB
Recommended Dilution:	<b>WB:</b> 1:500
Reactivity:	Human, Rat, Mouse
Host:	Mouse
Isotype:	IgG1
Immunogen:	Clone 39A1413 was generated from a synthetic peptide (coupled to KLH) corresponding to amino acid residues around serine 32 and 36 of human I $\kappa$ B $\alpha$ . This peptide sequence is highly conserved in mouse, rat, dog, cow, and pig I $\kappa$ B $\alpha$ .
Specificity:	The antibody detects a 38 kDa* protein on SDS-PAGE immunoblots of Jurkat cells treated with calpain inhibitor (ALLN) followed by TNF $\alpha$ , but the antibody does not detect this band in untreated cells.
Formulation:	PBS + 0.5% BSA and 0.05% NaN <sub>3</sub>
Concentration:	lot specific
Purification:	Protein A Purified
Conjugation:	Unconjugated
Storage:	Recommended that the undiluted antibody be aliquoted into smaller working volumes (10-30 $\mu$ L/vial depending on usage) upon arrival and stored long term at -20° C or -80° C, while keeping a working aliquot stored at 4° C for short term. Avoid freeze/thaw cycles. Stable for at least 1 year.
Stability:	After date of receipt, stable for at least 1 year at -20°C.
Predicted Protein Size:	38
Database Link:	<a href="#">P25963</a>



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**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.

**Note:**

Protein G purified tissue culture supernatant.