

# IKB alpha (IKBA) Antibody

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP2506a

## **Product Information**

Application	WB, E
Primary Accession	<u>P25963</u>
Other Accession	<u>NP_065390</u>
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB2574
Calculated MW	35609
Antigen Region	1-30

#### **Additional Information**

Gene ID	4792
Other Names	NF-kappa-B inhibitor alpha, I-kappa-B-alpha, IkB-alpha, IkappaBalpha, Major histocompatibility complex enhancer-binding protein MAD3, NFKBIA, IKBA, MAD3, NFKBI
Target/Specificity	This IKB alpha (IKBA) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from human IKB alpha (IKBA).
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	IKB alpha (IKBA) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

#### **Protein Information**

Name	NFKBIA
Synonyms	IKBA, MAD3, NFKBI

Function	Inhibits the activity of dimeric NF-kappa-B/REL complexes by trapping REL (RELA/p65 and NFKB1/p50) dimers in the cytoplasm by masking their nuclear localization signals (PubMed: <u>1493333</u> , PubMed: <u>36651806</u> , PubMed: <u>7479976</u> ). On cellular stimulation by immune and pro-inflammatory responses, becomes phosphorylated promoting ubiquitination and degradation, enabling the dimeric RELA to translocate to the nucleus and activate transcription (PubMed: <u>7479976</u> , PubMed: <u>7628694</u> , PubMed: <u>7796813</u> , PubMed: <u>7878466</u> ).
Cellular Location	Cytoplasm. Nucleus. Note=Shuttles between the nucleus and the cytoplasm by a nuclear localization signal (NLS) and a CRM1-dependent nuclear export.

### Background

NFKB1 or NFKB2 is bound to REL, RELA, or RELB to form the NFKB complex. The NFKB complex is inhibited by I-kappa-B proteins (NFKBIA or NFKBIB), which inactivate NF-kappa-B by trapping it in the cytoplasm. Phosphorylation of serine residues on the I-kappa-B proteins by kinases (IKBKA, or IKBKB) marks them for destruction via the ubiquitination pathway, thereby allowing activation of the NF-kappa-B complex. Activated NFKB complex translocates into the nucleus and binds DNA at kappa-B-binding motifs such as 5-prime GGGRNNYYCC 3-prime or 5-prime HGGARNYYCC 3-prime (where H is A, C, or T; R is an A or G purine; and Y is a C or T pyrimidine).

#### References

Miskolci, V., et al., Arch. Biochem. Biophys. 417(1):44-52 (2003). Kim, Y.S., et al., J. Biol. Chem. 278(31):28462-28469 (2003). Parcellier, A., et al., Mol. Cell. Biol. 23(16):5790-5802 (2003). Takada, Y., et al., J. Biol. Chem. 278(26):24233-24241 (2003). Place, R.F., et al., J. Cell. Physiol. 195(3):470-478 (2003).

#### Images



Anti-IKB alpha (IKBA) Antibody at 1:2000 dilution + THP-1 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 36 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes : Anti-Sumo-site. NFkB Antibody at 1:2000 dilution Lane 1: Daudi whole cell lysate Lane 2: Hela whole cell lysate Lane 3: Jurkat whole cell lysate Lane 4: K562 whole cell lysate Lane 5: NIH/3T3 whole cell lysate Lane 6: PC-12 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 36 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

## Citations

- A20 inhibits the release of inflammatory cytokines by suppressing the activation of the nuclear factor-kappa B pathway <u>in osteoarthritic fibroblast-like synoviocytes.</u>
  <u>Nanoformulated paclitaxel and AZD9291 synergistically eradicate non-small-cell lung cancers in vivo.</u>
  <u>Roflumilast reverses polymicrobial sepsis-induced liver damage by inhibiting inflammation in mice.</u>

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.