abcam

Product datasheet

Anti-IKB alpha (phospho Y305) antibody ab24784

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Overview

Product name	Anti-IKB alpha (phospho Y305) antibody
Description	Rabbit polyclonal to IKB alpha (phospho Y305)
Host species	Rabbit
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human IKB alpha (phospho Y305) conjugated to Keyhole Limpet Haemocyanin (KLH). Synthetic peptide conjugated to KLH corresponding to amino acid residues around tyrosine 305 of human IKB alpha. This peptide sequence has low homology to other IKB proteins.
Positive control	A431 and Jurkat cells treated with pervanadate.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS, 50% Glycerol, 0.1% BSA
Purity	Immunogen affinity purified
Purification notes	This antibody was cross-adsorbed to phospho-tyrosine coupled to agarose then affinity purified using phospho IKB alpha (Tyr-305) peptide.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab24784 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★☆☆ **(1)**	1/500. Detects a band of approximately 38 kDa.

Target

Function Inhibits the activity of dimeric NF-kappa-B/REL complexes by trapping REL dimers in the cytoplasm through masking of their nuclear localization signals. On cellular stimulation by immune and proinflammatory responses, becomes phosphorylated promoting ubiquitination and degradation, enabling the dimeric RELA to translocate to the nucleus and activate transcription.

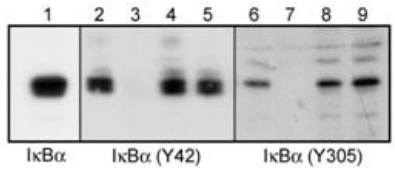
Involvement in disease Ectodermal dysplasia, anhidrotic, with T-cell immunodeficiency autosomal dominant

Sequence similarities Belongs to the NF-kappa-B inhibitor family.
Contains 5 ANK repeats.

Post-translational modifications Phosphorylated; disables inhibition of NF-kappa-B DNA-binding activity. Phosphorylation at positions 32 and 36 is prerequisite to recognition by UBE2D3 leading to polyubiquitination and subsequent degradation.
Sumoylated; sumoylation requires the presence of the nuclear import signal. Sumoylation blocks ubiquitination and proteasome-mediated degradation of the protein thereby increasing the protein stability.
Monoubiquitinated at Lys-21 and/or Lys-22 by UBE2D3. Ubiquitin chain elongation is then performed by CDC34 in cooperation with the SCF(FBXW11) E3 ligase complex, building ubiquitin chains from the UBE2D3-primed NFKBIA-linked ubiquitin. The resulting polyubiquitination leads to protein degradation. Also ubiquitinated by SCF(BTRC) following stimulus-dependent phosphorylation at Ser-32 and Ser-36.
Deubiquitinated by porcine reproductive and respiratory syndrome virus Nsp2 protein, which thereby interferes with NFKBIA degradation and impairs subsequent NF-kappa-B activation.

Cellular localization Cytoplasm. Nucleus. Shuttles between the nucleus and the cytoplasm by a nuclear localization signal (NLS) and a CRM1-dependent nuclear export.

Images



Western blot - Anti-IKB alpha (phospho Y305) antibody (ab24784)

Western blot analysis of A431 cells treated with pervanadate (1 mM) for 30 minutes (30 ug/lane). Blots were probed with anti-IkappaBalpha (lane 1), anti-phospho-IkappaBalpha?(Tyr-42) (**ab24783**; lanes 2-5), or anti-phospho-IkappaBalpha (Tyr-305) (ab24784; lanes 6-9). Both anti-phospho-IkappaBalpha (Tyr-42) and anti-phospho-IkappaBalpha (Tyr-305) were used in the presence of no blocking peptide (lane 2 & 6), phospho-IkappaBalpha (Tyr-42) peptide (lane 3 & 8), phospho-IkappaBalpha (Tyr-305) peptide (lane 4 & 7), or BSA conjugated to phospho-tyrosine (lane 5 & 9). Peptides and BSA-pTyr were used at 1 ug/ml.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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