

Product datasheet

Recombinant human IKK alpha protein (Active) ab102103

[6 Images](#)

Description

Product name	Recombinant human IKK alpha protein (Active)
Biological activity	Specific activity is 2.5nm/min/mg
Purity	> 75 % Densitometry. ab102103 was determined to be >75% pure by densitometry.
Expression system	Baculovirus infected Sf9 cells
Accession	O15111
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Molecular weight information	Approx 114 kDa by SDS-PAGE
Amino acids	1 to 745
Tags	GST tag N-Terminus
Additional sequence information	GenBank: BC092514

Specifications

Our [Abpromise guarantee](#) covers the use of **ab102103** in the following tested applications.

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

Applications	SDS-PAGE Western blot Functional Studies
Form	Liquid
Additional notes	ab204863 (IKB alpha peptide) can be utilized as a substrate for assessing kinase activity

Preparation and Storage

Stability and Storage Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.

pH: 7.50

Constituents: 0.307% Glutathione, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function

Acts as part of the IKK complex in the conventional pathway of NF-kappa-B activation and phosphorylates inhibitors of NF-kappa-B thus leading to the dissociation of the inhibitor/NF-kappa-B complex and ultimately the degradation of the inhibitor. As part of the non-canonical pathway of NF-kappa-B activation, the MAP3K14-activated CHUK/IKKA homodimer phosphorylates NFKB2/p100 associated with RelB, inducing its proteolytic processing to NFKB2/p52 and the formation of NF-kappa-B RelB-p52 complexes. Also phosphorylates NCOA3. Phosphorylates 'Ser-10' of histone H3 at NF-kappa-B-regulated promoters during inflammatory responses triggered by cytokines.

Tissue specificity

Widely expressed.

Involvement in disease

Defects in CHUK are the cause of cocoon syndrome (COCOS) [MIM:613630]; also known as fetal encasement syndrome. COCOS is a lethal syndrome characterized by multiple fetal malformations including defective face and seemingly absent limbs, which are bound to the trunk and encased under the skin.

Sequence similarities

Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. I-kappa-B kinase subfamily.

Contains 1 protein kinase domain.

Post-translational modifications

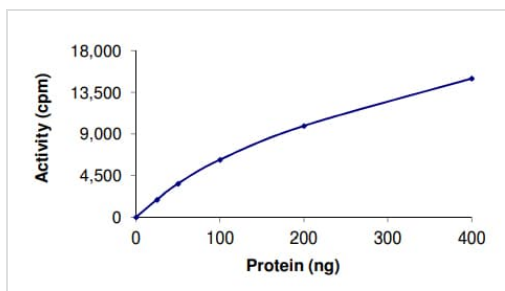
Phosphorylated by MAP3K14/NIK, AKT and to a lesser extent by MEKK1, and dephosphorylated by PP2A. Autophosphorylated.

Acetylation of Thr-179 by Yersinia yopJ prevents phosphorylation and activation, thus blocking the I-kappa-B signaling pathway.

Cellular localization

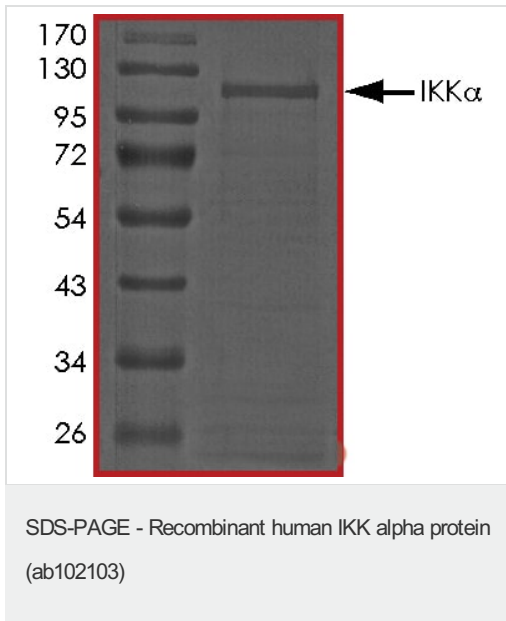
Cytoplasm. Nucleus. Shuttles between the cytoplasm and the nucleus.

Images

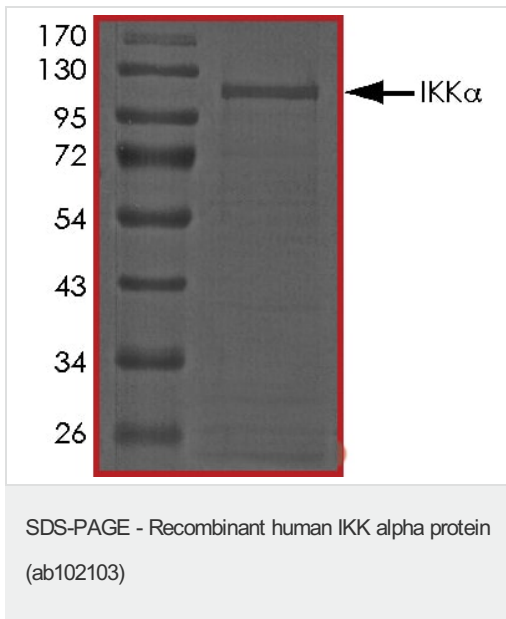


The specific activity of IKK alpha (ab102103) was determined to be 2.9 nmol/min/mg as per activity assay protocol

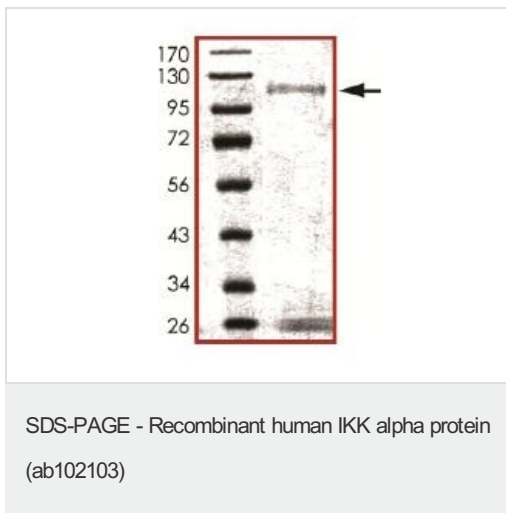
Functional Studies - Recombinant human IKK alpha protein (ab102103)



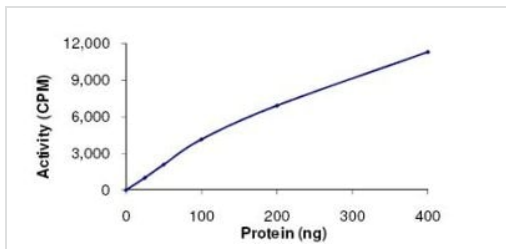
SDS PAGE analysis of ab102103



SDS PAGE analysis of ab102103



ab102103 was determined to be >75% pure by densitometry. MWt ~114 kDa.



Functional Studies - Recombinant human IKK alpha protein (ab102103)

The specific activity of ab102103 was determined to be 2.5 nmol/mg/min.



Western blot - Recombinant human IKK alpha protein (ab102103)

Anti-IKK alpha antibody [Y463] (ab32041) at 1/10000 dilution + Recombinant human IKK alpha protein (Active) (ab102103) at 0.01 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Exposure time: 10 seconds

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

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