

## Product datasheet

# Recombinant human IKK alpha protein (Active) ab102103

[1 References](#) [6 Images](#)

### Description

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

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

### Preparation and Storage

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

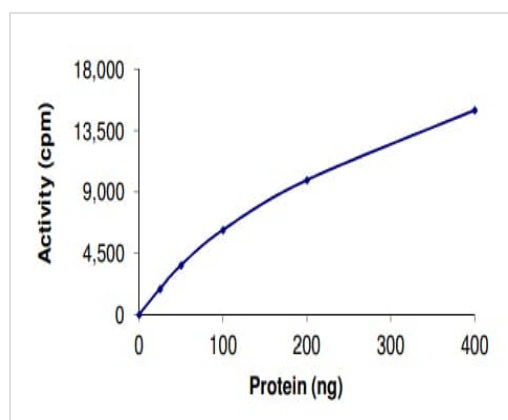
Phosphorylated by MAP3K14/NIK, AKT and to a lesser extent by MEKK1, and dephosphorylated by PP2A. Autophosphorylated.

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

### Cellular localization

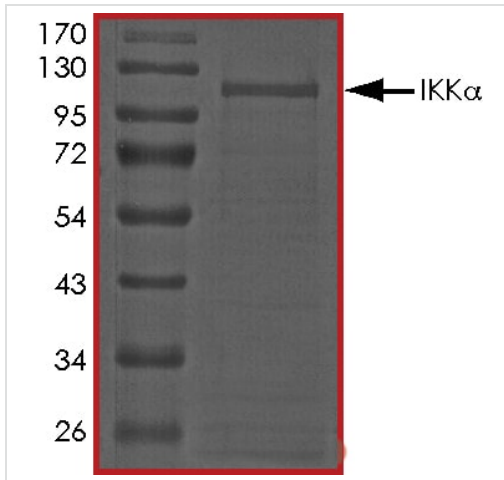
Cytoplasm. Nucleus. Shuttles between the cytoplasm and the nucleus.

## Images



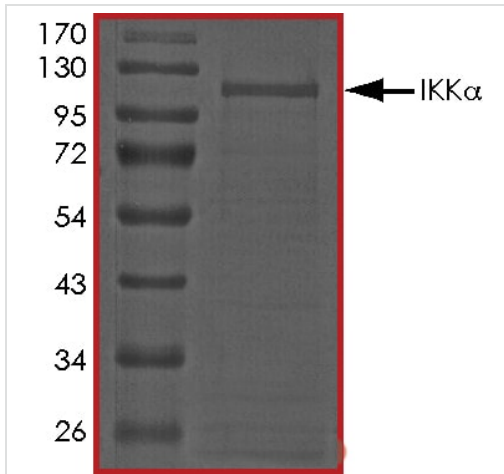
Functional Studies - Recombinant human IKK alpha protein (ab102103)

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



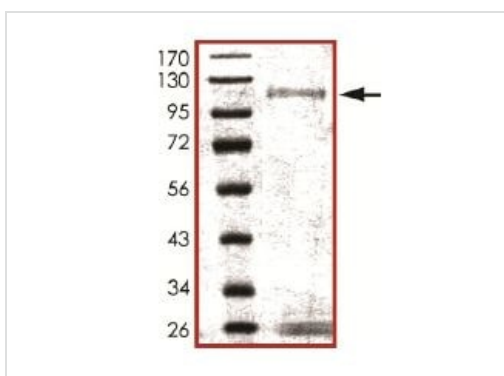
SDS-PAGE - Recombinant human IKK alpha protein  
(ab102103)

SDS PAGE analysis of ab102103



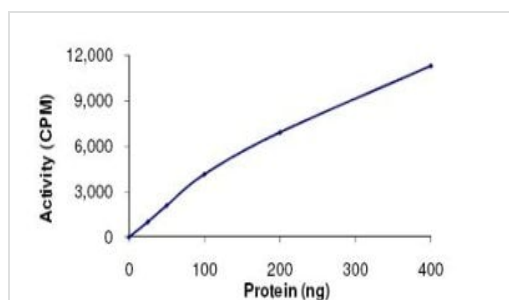
SDS-PAGE - Recombinant human IKK alpha protein  
(ab102103)

SDS PAGE analysis of ab102103



SDS-PAGE - Recombinant human IKK alpha protein  
(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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