**Product datasheet**

**Anti-IKK alpha (phospho T23) antibody ab38515**

⭐⭐⭐⭐⭐ 2 Abreviews  10 References  4 Images

**Overview**

<table>
<thead>
<tr>
<th>Product name</th>
<th>Anti-IKK alpha (phospho T23) antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Rabbit polyclonal to IKK alpha (phospho T23)</td>
</tr>
<tr>
<td>Host species</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Specificity</td>
<td>This antibody is specific for IKK alpha only when phosphorylated at threonine 23.</td>
</tr>
<tr>
<td>Tested applications</td>
<td><strong>Suitable for:</strong> ICC/IF, WB, IHC-P, ELISA, IHC-Fr</td>
</tr>
<tr>
<td>Species reactivity</td>
<td><strong>Reacts with:</strong> Mouse, Rat, Human</td>
</tr>
<tr>
<td>Immunogen</td>
<td>Synthetic phosphopeptide derived from Human IKK alpha around the phosphorylation site of threonine 23 (LGTPGG).</td>
</tr>
<tr>
<td>Positive control</td>
<td>Colon carcinoma tissue slides and MDA-MB-435 cell extract.</td>
</tr>
</tbody>
</table>

**Properties**

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage instructions</td>
<td>Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.</td>
</tr>
</tbody>
</table>
| Storage buffer       | Preservative: 0.02% Sodium Azide  
                        Constituents: 50% Glycerol, PBS, 150mM Sodium chloride, pH 7.4 |
| Purity               | Immunogen affinity purified |
| Purification notes   | The antibody was affinity purified from rabbit antiserum by affinity chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site. |
| Clonality            | Polyclonal |
| Isotype              | IgG     |

**Applications**

Our Abpromise guarantee covers the use of ab38515 in the following tested applications.

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

**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

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use a concentration of 1 µg/ml.</td>
</tr>
<tr>
<td>WB</td>
<td>1/500 - 1/1000. Detects a band of approximately 85 kDa (predicted molecular weight: 85 kDa).</td>
<td></td>
</tr>
<tr>
<td>IHC-P</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>ELISA</td>
<td>1/4000.</td>
<td></td>
</tr>
<tr>
<td>IHC-Fr</td>
<td>★★★★★</td>
<td>Use at an assay dependent concentration. See Abreview.</td>
</tr>
</tbody>
</table>
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IKK alpha (phospho T23) antibody (ab38515)

ab38515 at a 1:50 dilution staining IKK alpha in Human colon carcinoma tissue using Immunohistochemistry, Paraffin Embedded Tissue.

Left image : untreated.

Right image : treated with phosphopeptide.

Western blot - Anti-IKK alpha (phospho T23) antibody (ab38515) at 1:500 dilution

All lanes : Anti-IKK alpha (phospho T23) antibody (ab38515) at 1/500 dilution

Lane 1 : MDA-MB-435 cell extract.
Lane 2 : MDA-MB-435 cell extract + EGF (The cells were treated with 200ng/ml EGF for 5 minutes).

Lysates/proteins at 30 µg per lane.

Secondary

All lanes : Alkaline Phosphatase AffiniPure Goat Anti-Rabbit IgG (H+L)

Predicted band size: 85 kDa
Observed band size: 85 kDa

Lanes can be loaded with 5-30µg of total protein.
Immunohistochemistry (Frozen sections) - Anti-IKK alpha (phospho T23) antibody (ab38515)

This image is courtesy of an anonymous Abreview.

ab38515 at 1/100 staining mouse skin tissue sections by IHC-Fr. The tissue was paraformaldehyde fixed and blocked with serum prior to incubation with the antibody for 1 hour. An Alexa Fluor® conjugated goat anti-rabbit antibody was used as the secondary.

Immunocytochemistry/ Immunofluorescence - Anti-IKK alpha (phospho T23) antibody (ab38515)

ICC/IF image of ab38515 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab38515, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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