Product name: Anti-TAK1 (phospho S439) antibody [EPR2863] ab109404

Description: Rabbit monoclonal [EPR2863] to TAK1 (phospho S439)

Host species: Rabbit

Specificity: ab109404 only detects TAK1 phosphorylated at Serine 439 in Human or TAK1 phosphorylated at Serine 412 in Mouse.

Tested applications: Suitable for: Dot blot, WB, IP, ICC

Unsuitable for: Flow Cyt or IHC-P

Species reactivity: Reacts with: Mouse, Rat, Human

Immunogen: Phospho specific peptide against residues surrounding Serine 439 of Human TAK1.

Positive control: HeLa cell lysate.

General notes: Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

This product is a recombinant rabbit monoclonal antibody.

Properties:

Form: Liquid

Storage instructions: Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.

Storage buffer: pH: 7.20
Preservative: 0.05% Sodium azide
Constituents: 0.1% BSA, 40% Glycerol, 9.85% Tris glycine, 50% Tissue culture supernatant

Purity: Tissue culture supernatant

Clonality: Monoclonal

Clone number: EPR2863

Isotype: IgG
Our Abpromise guarantee covers the use of ab109404 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Dot blot</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>WB</td>
<td>1/1000 - 1/10000. Detects a band of approximately 75 kDa (predicted molecular weight: 67 kDa).</td>
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<tr>
<td>IP</td>
<td>1/10 - 1/100.</td>
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<tr>
<td>ICC</td>
<td>1/100 - 1/250.</td>
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Is unsuitable for Flow Cyt or IHC-P.

**Target**

**Function**
Component of a protein kinase signal transduction cascade. Mediator of TRAF6 and TGF-beta signal transduction. Activates KBBK and MAPK8 in response to TRAF6 signaling. Stimulates NF-kappa-B activation and the p38 MAPK pathway. In osmotic stress signaling, plays a major role in the activation of MAPK8/JNK, but not that of NF-kappa-B.

**Sequence similarities**
Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase kinase subfamily. Contains 1 protein kinase domain.

**Post-translational modifications**
Association with TAB1/MAP3K7IP1 promotes autophosphorylation and subsequent activation. Association with TAB2/MAP3K7IP2, itself associated with free unanchored Lys-63 polyubiquitin chain, promotes autophosphorylation and subsequent activation of MAP3K7. Dephosphorylation at Thr-187 by PP2A and PPP6C leads to inactivation. Ubiquitinated, leading to proteasomal degradation (By similarity). Requires 'Lys-63'-linked polyubiquitination for autophosphorylation and subsequent activation. 'Lys-63'-linked ubiquitination does not lead to proteasomal degradation. Deubiquitinated by CYLD, a protease that selectively cleaves 'Lys-63'-linked ubiquitin chains. Deubiquitinated by Y.enterocolitica YopP.
**Western blot** - Anti-TAK1 (phospho S439) antibody [EPR2863] (ab109404)

- **All lanes**: Anti-TAK1 (phospho S439) antibody [EPR2863] (ab109404) at 1/1000 dilution
- **Lane 1**: HeLa whole cell lysate
- **Lane 2**: HeLa treated with 100nM Calyculin A and 20ng/ml human IL-1β for 10 minutes whole cell lysate
- **Lane 3**: HeLa treated with 100nM Calyculin A and 20ng/ml human IL-1β for 10 minutes whole cell lysate. Then the membrane was incubated with alkaline phosphatase.

Lysates/proteins at 10 µg per lane.

**Secondary**

- **All lanes**: Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size**: 67 kDa

**Observed band size**: 75 kDa

*why is the actual band size different from the predicted?*

**Exposure time**: 10 seconds

Dilution and blocking buffer: 5% NFDM/TBST.

**Dot Blot** - Anti-TAK1 (phospho S439) antibody [EPR2863] (ab109404)

Dot Blot analysis of Lane 1: TAK1 (phospho S439) phospho peptide and Lane 2: TAK1 non-phospho peptide labeling TAK1 (phospho S439) with ab109404 at 1/1000 dilution (0.009 μg/ml). 5% NFDM/TBST was used as the diluting and blocking buffer. *ab97051* Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated was used as the secondary antibody at 1/100,000 dilution. Exposure time: 3 minutes.
**Western blot - Anti-TAK1 (phospho S439) antibody [EPR2863] (ab109404)**

**All lanes**: Anti-TAK1 (phospho S439) antibody [EPR2863] (ab109404) at 1/1000 dilution

**Lane 1**: HeLa cell lysate

**Lane 2**: HeLa cell lysate treated with transforming growth factor-beta (TGF-beta)

Lysates/proteins at 10 µg per lane.

**Predicted band size**: 67 kDa

**Observed band size**: 75 kDa

Why is the actual band size different from the predicted?

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

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