

## Product datasheet

# Anti-SHC (phospho Y239 + Y240) antibody [EP419] ab109455

Recombinant RabMAb

3 Images

### Overview

<b>Product name</b>	Anti-SHC (phospho Y239 + Y240) antibody [EP419]
<b>Description</b>	Rabbit monoclonal [EP419] to SHC (phospho Y239 + Y240)
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB <b>Unsuitable for:</b> Flow Cyt, ICC/IF, IHC-P or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	293T cell lysates, treated with EGF.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
<b>Storage buffer</b>	<p>pH: 7.20</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA</p>
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal

**Clone number** EP419

**Isotype** IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab109455 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		1/1000 - 1/10000. Predicted molecular weight: 63 kDa.

**Application notes** Is unsuitable for Flow Cyt, ICC/IF, IHC-P or IP.

## Target

**Function** Signaling adapter that couples activated growth factor receptors to signaling pathways. Participates in a signaling cascade initiated by activated KIT and KITLG/SCF. Isoform p46Shc and isoform p52Shc, once phosphorylated, couple activated receptor tyrosine kinases to Ras via the recruitment of the GRB2/SOS complex and are implicated in the cytoplasmic propagation of mitogenic signals. Isoform p46Shc and isoform p52Shc may thus function as initiators of the Ras signaling cascade in various non-neuronal systems. Isoform p66Shc does not mediate Ras activation, but is involved in signal transduction pathways that regulate the cellular response to oxidative stress and life span. Isoform p66Shc acts as a downstream target of the tumor suppressor p53 and is indispensable for the ability of stress-activated p53 to induce elevation of intracellular oxidants, cytochrome c release and apoptosis. The expression of isoform p66Shc has been correlated with life span (By similarity). Participates in signaling downstream of the angiopoietin receptor TEK/TIE2, and plays a role in the regulation of endothelial cell migration and sprouting angiogenesis.

**Tissue specificity** Widely expressed. Expressed in neural stem cells but absent in mature neurons.

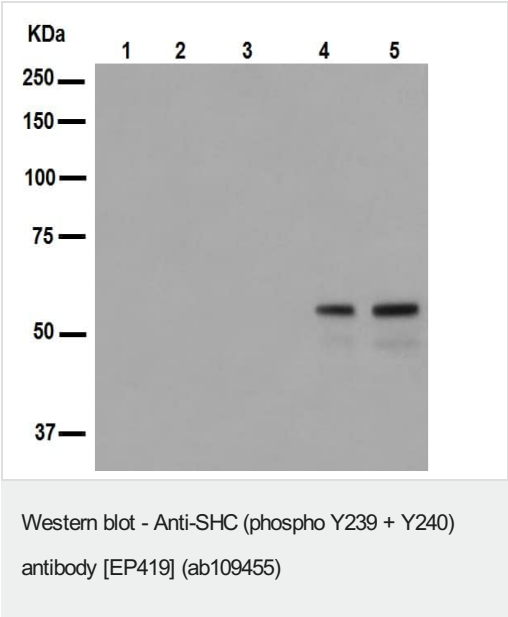
**Sequence similarities** Contains 1 PID domain.  
Contains 1 SH2 domain.

**Domain** In response to a variety of growth factors, isoform p46Shc and isoform p52Shc bind to phosphorylated Trk receptors through their phosphotyrosine binding (PID) and/or SH2 domains. The PID and SH2 domains bind to specific phosphorylated tyrosine residues in the Asn-Pro-Xaa-Tyr(P) motif of the Trk receptors. Isoform p46Shc and isoform p52Shc are in turn phosphorylated on three tyrosine residues within the extended proline-rich domain. These phosphotyrosines act as docking site for GRB2 and thereby are involved in Ras activation.

**Post-translational modifications** Phosphorylated by activated epidermal growth factor receptor. Phosphorylated in response to FLT4 and KIT signaling. Isoform p46Shc and isoform p52Shc are phosphorylated on tyrosine residues of the Pro-rich domain. Isoform p66Shc is phosphorylated on Ser-36 by PRKCB upon treatment with insulin, hydrogen peroxide or irradiation with ultraviolet light (By similarity). Tyrosine phosphorylated in response to FLT3 signaling (By similarity). Tyrosine phosphorylated by activated PTK2B/PYK2 (By similarity). Tyrosine phosphorylated by ligand-activated ALK. Tyrosine phosphorylated by ligand-activated PDGFRB. Tyrosine phosphorylated by TEK/TIE2. May be tyrosine phosphorylated by activated PTK2/FAK1; tyrosine phosphorylation was seen in an astrocytoma biopsy, where PTK2/FAK1 kinase activity is high, but not in normal brain tissue. Isoform p52Shc dephosphorylation by PTPN2 may regulate interaction with GRB2.

<b>Cellular localization</b>	<p>Cytoplasm; Mitochondrion matrix. Localized to the mitochondria matrix. Targeting of isoform p46Shc to mitochondria is mediated by its first 32 amino acids, which behave as a bona fide mitochondrial targeting sequence. Isoform p52Shc and isoform p66Shc, that contain the same sequence but more internally located, display a different subcellular localization and Mitochondrion. In case of oxidative conditions, phosphorylation at 'Ser-36' of isoform p66Shc, leads to mitochondrial accumulation.</p>
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Images



**All lanes :** Anti-SHC (phospho Y239 + Y240) antibody [EP419] (ab109455) at 1/5000 dilution

**Lane 1 :** 293T cell lysates, EGF treated with single phospho (pY239) peptide

**Lane 2 :** 293T cell lysates, EGF treated with single phospho (pY240) peptide

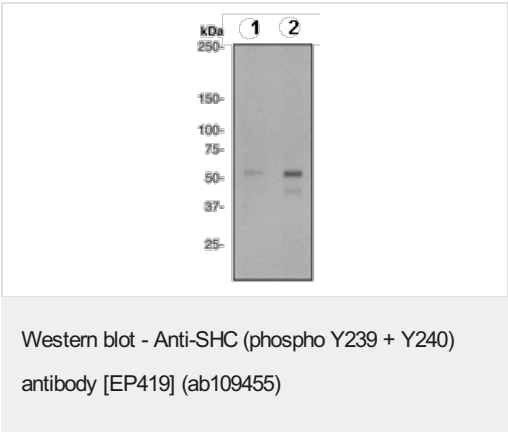
**Lane 3 :** 293T cell lysates, EGF treated with Double phospho (pY239/pY240) peptide

**Lane 4 :** 293T cell lysates, EGF treated with non-phospho peptide blocking

**Lane 5 :** 293T cell lysates, EGF treated

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 63 kDa



**All lanes :** Anti-SHC (phospho Y239 + Y240) antibody [EP419] (ab109455) at 1/500 dilution

**Lane 1 :** 293T cell lysates, untreated

**Lane 2 :** 293T cell lysates, treated with EGF

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 63 kDa

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-SHC (phospho Y239 + Y240) antibody [EP419]  
(ab109455)

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

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- Extensive multi-media technical resources to help you
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