




Anti-SHC antibody ab131515

[2 References](#) [3 Images](#)

Overview

Product name	Anti-SHC antibody
Description	Rabbit polyclonal to SHC
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, ICC/IF
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat 
Immunogen	Synthetic peptide conjugated to KLH, surrounding amino acids 425-429 (P-S-Y-V-N) of Human SHC (NP_001123512.1). Run BLAST with  Run BLAST with 
Positive control	HeLa cells; 293 cell extract; Human breast carcinoma tissue.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 48% PBS, 50% Glycerol (glycerin, glycerine), 0.88% Sodium chloride PBS without Mg ²⁺ and Ca ²⁺
Purity	Immunogen affinity purified
Purification notes	ab131515 was purified by affinity chromatography using epitope specific peptide.
Clonality	Polyclonal

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab131515 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		1/500 - 1/1000. Predicted molecular weight: 62 kDa.
IHC-P		1/50 - 1/100.
ICC/IF		1/100 - 1/200.

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

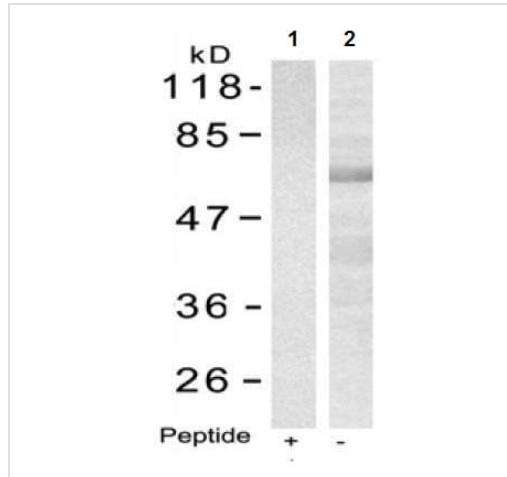
Phosphorylated by activated epidermal growth factor receptor. Phosphorylated in response to FLT4 and KIT signaling. Isoform p46Shc and isoform p52Shc are phosphorylated on tyrosine residues of the Pro-rich domain. Isoform p66Shc is phosphorylated on Ser-36 by PRKCB upon treatment with insulin, hydrogen 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.

Cellular localization

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.

Images



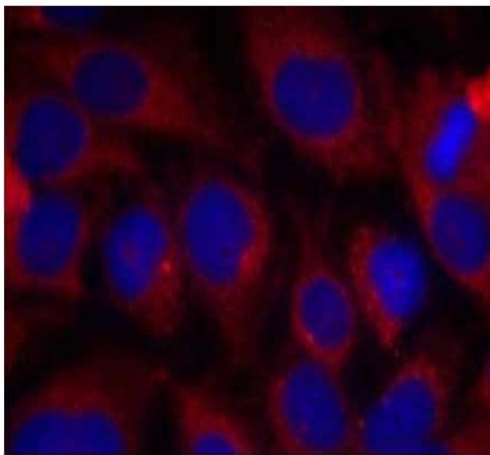
Western blot - Anti-SHC antibody (ab131515)

All lanes : Anti-SHC antibody (ab131515) at 1/500 dilution

Lane 1 : 293 cell extract with blocking peptide

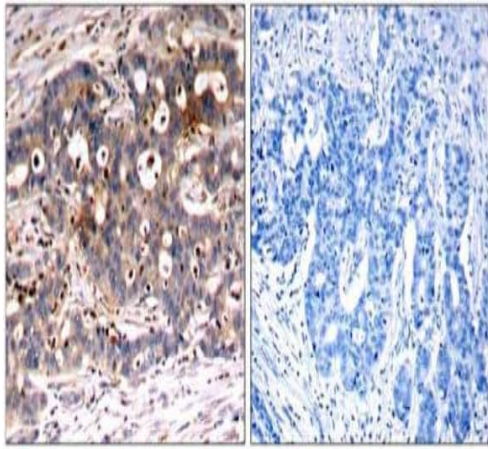
Lane 2 : 293 cell extract

Predicted band size: 62 kDa



Immunocytochemistry/ Immunofluorescence - Anti-SHC antibody (ab131515)

Immunofluorescent analysis of methanol-fixed HeLa cells labelling SHC with ab131515 at 1/100 dilution.



Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue labelling SHC with ab131515 at 1/50 dilution. The image on the right is treated with the synthesized peptide.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SHC antibody (ab131515)

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