

Shc (Phospho Ser239/240) Rabbit pAb

CatalogNo: YP1488

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB, ELISA, IHC

MW

- 66kD(p66), 52kD(p52), 46kD(p46)kD (Observed)

Isotype

- IgG

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-2000

IHC 1:50-300

ELISA 1:2000-20000

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen Synthesized phospho peptide around human Shc (Ser239 and 240)

Specificity This antibody detects endogenous levels of Shc only when phosphorylated at Ser239 or ser240, and dually phosphorylated at two sites.

Target Information

Gene name SHC1 SHC SHCA

Protein Name Shc (Ser239/240)

Organism	Gene ID	UniProt ID
Human	6464 ;	P29353 ;
Mouse	20416 ;	P98083 ;
Rat	85385 ;	Q5M824 ;

Cellular Localization

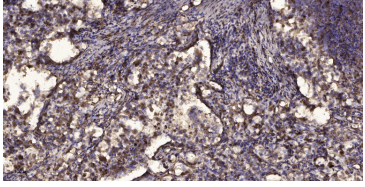
Cytoplasm.; [Isoform p46Shc]: Mitochondrion matrix . Localized to the mitochondria matrix. Targeting of isoform p46Shc to mitochondria is mediated by its first 32 amino acids , which behave as a bona fide mitochondrial targeting sequence. Isoform p52Shc and isoform p66Shc , that contain the same sequence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

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

Function

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. ,Function:Signaling adapter that couples activated growth factor receptors to signaling pathway. 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. ,PTM:Phosphorylated by activated epidermal growth factor receptor. Isoform p46Shc and isoform p52Shc are phosphorylated on tyrosine residues of the Pro-rich domain. Isoform p66Shc is phosphorylated on Ser-36 upon treatment with insulin , hydrogen peroxide or irradiation with ultraviolet light. ,similarity:Contains 1 PID domain. ,similarity:Contains 1 SH2 domain. ,subcellular location: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. ,subunit:Interacts with the Trk receptors in a phosphotyrosine-dependent manner. Interacts with the NPXY motif of tyrosine-phosphorylated IGF1R and INSR in vitro via the PID domain. Once activated , binds to GRB2. Interacts with tyrosine-phosphorylated CD3T. Interacts with the N-terminal region of APS. Interacts with phosphorylated LRP1 and IRS4. Interacts with INPP5D/SHIP1 and INPPL1/SHIP2. ,tissue specificity:Widely expressed. Expressed in neural stem cells but absent in mature neurons. ,

| Validation Data



Immunohistochemical analysis of paraffin-embedded human Squamous cell carcinoma of lung. 1, Antibody was diluted at 1:200 (4°C overnight). 2, Tris-EDTA, pH 9.0 was used for antigen retrieval. 3, Secondary antibody was diluted at 1:200 (room temperature, 45min).

| Contact information

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