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Mouse Anti-Shc1 antibody

SLM-50258M

Product Name	Shc1
Chinese Name	SH2 结构域转化蛋白 1 单克隆抗体
Alias	p46; p52; p52 SHC; p52SHC; p66; p66 SHC; p66SHC; SH2 domain protein C1; SHC (Src homology 2 domain containing) transforming protein 1; SHC 1; SHC A; Shc; SHC transforming protein 1; SHC transforming protein; SHC1; SHCA; Src homology 2 domain containing transforming protein C1.
Research Area	Tumour immunology Signal transduction transcriptional regulatory factor
Immunogen Species	Mouse
Clonality	Monoclonal
React Species	Human,Mouse(predicted:Rat)
Applications	WB=1:500-2000,IHC-P=1:50-500,IHC-F=1:50-500,IF=1:50-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	63kDa
Cellular localization	cytoplasmic
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human Shc1
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300.
Storage	Store at 2-8℃ for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed
Product Detail	This gene encodes three main isoforms that differ in activities and subcellular location. While all three are adapter proteins in signal transduction pathways,

the longest (p66Shc) may be involved in regulating life span and the effects of reactive oxygen species. The other two isoforms, p52Shc and p46Shc, link activated receptor tyrosine kinases to the Ras pathway by recruitment of the GRB2/SOS complex. p66Shc is not involved in Ras activation. Unlike the other two isoforms, p46Shc is targeted to the mitochondrial matrix. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Feb 2011]

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.

Subunit:
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 and DDR2. Interacts with the N-terminal region of APS. Interacts with phosphorylated LRP1 and IRS4. Interacts with INPP5D/SHIP1 and INPPL1/SHIP2. Interacts with TRIM31. Interacts with PTPN6/SHP (tyrosine phosphorylated). Identified in a complex containing FGFR4, NCAM1, CDH2, PLCG1, FRS2, SRC, SHC1, GAP43 and CTT. Interacts with ALK, GAB2, GRB7 and KIT. Interacts with FLT4 (tyrosine-phosphorylated). Interacts with EPHB1 and GRB2; activates the MAPK/ERK cascade to regulate cell migration. Interacts with PDGFRB (tyrosine-phosphorylated). Interacts with ERBB4. Interacts with TEK/TIE2 (tyrosine-phosphorylated). Interacts with the Trk receptors NTRK1, NTRK2 and NTRK3; in a phosphotyrosine-dependent manner. Interacts with PTK2/FAK1.

Subcellular Location:
Cytoplasm.

Isoform p46Shc: Mitochondrion matrix. Note=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. Note=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.

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. Tyrosine phosphorylated in response to FLT3 signaling. Tyrosine phosphorylated by activated PTK2B/PYK2. 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.

Similarity:
Contains 1 PID domain.
Contains 1 SH2 domain.

SWISS:
P29353

Gene ID:
6464

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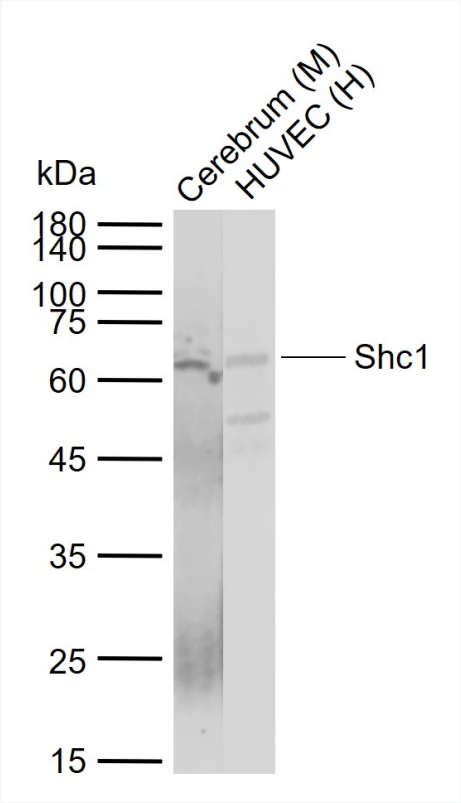
Product Picture



Sample:

Lane 1: Mouse Cerebrum tissue lysates

Lane 2: Human HUVEC cell lysates

Primary: Anti-Shc1 (SLM-50258M) at 1/200 dilution

Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution

Predicted band size: 63 kDa

Observed band size: 63 kDa