SANTA CRUZ BIOTECHNOLOGY, INC.

Shc (H-108): sc-1695

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Growth factor triggering of protein tyrosine kinase receptors induces signals that cascade to the nucleus activating mitogenic, as well as other, responses. Critical components of this process include adapter proteins such as Shc and IRS-1 that lack detectable catalytic activity. These are immediate substrates of receptor tyrosine kinase activity and serve to physically link activated receptors to downstream signaling components. Whereas Shc has been implicated in signaling by diverse receptor families, IRS-1 serves primarily as the major Insulin receptor substrate. Shc also participates in Insulin signaling by linking the Insulin receptor to Ras by forming complexes with the adapter protein GRB2 and Sos independently of IRS-1. A protein immunologically related to IRS-1, originally designated 4PS and now known as IRS-2, was shown to become highly tyrosine phosphorylated in response to IL-4 or IGF-1 in cells lacking IRS-1. An additional member of this family of signaling intermediates, Shb, is a SH2-containing protein with characteristic proline-rich domains.

CHROMOSOMAL LOCATION

Genetic locus: SHC1 (human) mapping to 1q21.3; Shc1 (mouse) mapping to 3 F1.

SOURCE

Shc (H-108) is a rabbit polyclonal antibody raised against amino acids 366-473 of Shc of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as HRP conjugate for Western blotting, sc-1695 HRP, 200 µg/1 ml.

APPLICATIONS

Shc (H-108) is recommended for detection of Shc p66, p52 and p46 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Shc (H-108) is also recommended for detection of Shc p66, p52 and p46 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Shc siRNA (h): sc-29480, Shc siRNA (m): sc-29481, Shc shRNA Plasmid (h): sc-29480-SH, Shc shRNA Plasmid (m): sc-29481-SH, Shc shRNA (h) Lentiviral Particles: sc-29480-V and Shc shRNA (m) Lentiviral Particles: sc-29481-V.

Molecular Weight of Shc p66 amino acids 1-583: 66 kDa.

Molecular Weight of Shc p52 amino acids 111-583: 52 kDa.

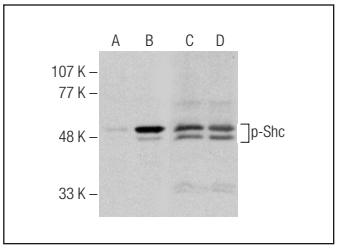
Molecular Weight of Shc p46 amino acids 156-583: 46 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, SK-BR-3 cell lysate: sc-2218 or MCF7 whole cell lysate: sc-2206.

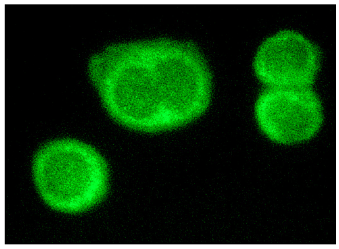
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Western blot analysis of Shc phosphorylation in untreated (**A**,**C**) and EGF treated (**B**,**D**) HEK293 whole cell lysates. Antibodies tested include p-Shc (Tyr 239/240)-R: sc-18074-R (**A**,**B**) and Shc (H-108): sc-1695 (**C**,**D**).



Shc (H-108): sc-1695. Immunofluorescence staining of methanol-fixed SK-BR-3 cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Cowan, K.J., et al. 2000. Identification of Shc as the primary protein binding to the tyrosine-phosphorylated β3 subunit of αIIb β3 outside-in integrin platelet signaling. J. Biol. Chem. 275: 36423-36429.
2. Suzu, S., et al. 2000. $p56^{dok-2}$ as a cytokine-inducible inhibitor of cell proliferation and signal transduction. EMBO J. 19: 5114-5122.
3. Lee, S.K., et al. 2008. Alteration of $p66^{shc}$ is associated with endothelial dysfunction in the abdominal aortic coarctation of rats. FEBS Lett. 582: 2561-2566.
4. Goh, L.K., et al. 2010. Multiple mechanisms collectively regulate clathrin-mediated endocytosis of the epidermal growth factor receptor. J. Cell Biol. 189: 871-883.
5. Vitagliano, D., et al. 2011. The tyrosine kinase inhibitor ZD6474 blocks proliferation of RET mutant medullary thyroid carcinoma cells. Endocr. Relat. Cancer 18: 1-11.
6. Ku, H.C., et al. 2012. Green tea (-)-epigallocatechin gallate inhibits IGF-I and IGF-II stimulation of 3T3-L1 preadipocyte mitogenesis via the 67-kDa laminin receptor, but not AMP-activated protein kinase pathway. Mol. Nutr. Food Res. 56: 580-592.

RESEARCH USE

For research use only, not for use in diagnostic procedures.