

SH2-B $\alpha/\beta/\gamma/\delta$ (G-17): sc-8895

BACKGROUND

SH2-B is a component of the signaling network involved in the regulation of cell shape and movement. SH2-B is related to the APS (adapter molecule containing PH and SH2 domains) family of adapter proteins, which characteristically contain a Pleckstrin homology (PH) domain, an SH2 domain and a tyrosine phosphorylation site. SH2-B is alternatively spliced to generate three distinct isoforms, SH2-B α , β , and γ , that share an identical N-terminal sequence, including the PH domain, the SH2 domain, and multiple proline-rich motifs. The isoform SH2-B β contributes to the regulation of the actin cytoskeleton as it associates with various tyrosine kinases in response to growth factor stimulation. Following PDGF stimulation, SH2-B β can directly interact with the PDGF receptor (PDGFR) where it is phosphorylated on tyrosine residues and functions as a signaling protein for the PDGFR pathway. In addition, SH2-B β is also a substrate for JAK2 and, thereby, mediates the cytoskeletal reorganization that is induced by the signaling pathways of various growth factors.

REFERENCES

- Frank, S.J., Yi, W., Zhao, Y., Goldsmith, J.F., Gilliland, G., Jiang, J., Sakai, I. and Kraft, A.S. 1995. Regions of the JAK2 tyrosine kinase required for coupling to the growth hormone receptor. *J. Biol. Chem.* 270: 14776-14785.
- Rui, L., Mathews, L.S., Hotta, K., Gustafson, T.A. and Carter-Su, C. 1997. Identification of SH2-B β as a substrate of the tyrosine kinase JAK2 involved in growth hormone signaling. *Mol. Cell. Biol.* 17: 6633-6644.
- Rui, L. and Carter-Su, C. 1998. Platelet-derived growth factor (PDGF) stimulates the association of SH2-B β with PDGF receptor and phosphorylation of SH2-B β . *J. Biol. Chem.* 273: 21239-21245.
- Rui, L. and Carter-Su, C. 1999. Identification of SH2-B β as a potent cytoplasmic activator of the tyrosine kinase Janus kinase 2. *Proc. Natl. Acad. Sci. USA* 96: 7172-7177.
- Rui, L., Herrington, J. and Carter-Su, C. 1999. SH2-B is required for nerve growth factor-induced neuronal differentiation. *J. Biol. Chem.* 274: 10590-10594.
- Rui, L., Herrington, J. and Carter-Su, C. 1999. SH2-B, a membrane-associated adapter, is phosphorylated on multiple serines/threonines in response to nerve growth factor by kinases within the MEK/ERK cascade. *J. Biol. Chem.* 274: 26485-26492.

SOURCE

SH2-B $\alpha/\beta/\gamma/\delta$ (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SH2-B β of rat origin.

PRODUCT

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

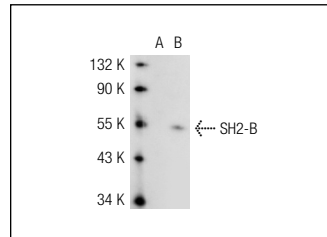
Blocking peptide available for competition studies, sc-8895 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SH2-B $\alpha/\beta/\gamma/\delta$ (G-17) is recommended for detection of SH2-B $\alpha/\beta/\gamma$, and δ of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for SH2-B siRNA (h): sc-44095, SH2-B shRNA Plasmid (h): sc-44095-SH and SH2-B shRNA (h) Lentiviral Particles: sc-44095-V.

DATA



SH2-B $\alpha/\beta/\gamma/\delta$ (G-17): sc-8895. Western blot analysis of SH2-B expression in non-transfected: sc-117752 (A) and mouse SH2-B transfected: sc-127534 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Ohtsuka, S., et al. 2002. SH2-B is required for both male and female reproduction. *Mol. Cell. Biol.* 22: 3066-3077.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **SH2-B $\alpha/\beta/\gamma/\delta$ (C-11): sc-514142** or **SH2-B (E-8): sc-393395**, our highly recommended monoclonal alternatives to SH2-B $\alpha/\beta/\gamma/\delta$ (G-17).