SANTA CRUZ BIOTECHNOLOGY, INC.

Shf (m): 293T Lysate: sc-127535

BACKGROUND

The SH2 (Src homology 2) domain is a structurally conserved motif that contains two α helices and seven β strands, and is found in a variety of proteins that are involved in signal transduction throughout the cell. Specifically, the SH2 domain targets SH2 domain-containing proteins to tyrosine-phosphorylated sites, an event that can trigger a protein-protein interaction cascade which may ultimately effect gene expression and cellular function. Shb (SH2 domain-containing adapter protein b), Shd (SH2 domain-containing adapter protein d), She (SH2 domain-containing adapter protein e) and Shf (SH2 domain-containing adapter protein f) are SH2 domain-containing proteins that play various roles throughout the cell. Shb is a widely expressed protein that localizes to both the cell membrane and the cytoplasm and plays an important role in signal transduction, mainly by linking activated proteins to downstream signaling targets, thereby propagating a signal cascade. Unlike Shb, Shd and Shf are thought to function as adaptor proteins, the former of which may be involved in apoptotic regulation.

REFERENCES

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2. Russell, R.B., et al. 1992. Conservation analysis and structure prediction of the SH2 family of phosphotyrosine binding domains. FEBS Lett. 304: 15-20.
3. Welsh, M., et al. 1994. Shb is a ubiquitously expressed Src homology 2 protein. Oncogene 9: 19-27.
4. Karlsson, T., et al. 1995. Molecular interactions of the Src homology 2 domain protein Shb with phosphotyrosine residues, tyrosine kinase receptors and Src homology 3 domain proteins. Oncogene 10: 1475-1483.
5. Karlsson, T. and Welsh, M. 1996. Apoptosis of NIH/3T3 cells overexpressing the Src homology 2 domain protein Shb. Oncogene 13: 955-961.
6. Karlsson, T., et al. 1998. The Src homology 2 domain protein Shb transmits basic fibroblast growth factor- and nerve growth factor-dependent differentiation signals in PC-12 cells. Cell Growth Differ. 9: 757-766.
7. Lindholm, C.K., et al. 2000. Shf, a Shb-like adapter protein, is involved in PDGF-α-receptor regulation of apoptosis. Biochem. Biophys. Res. Commun. 278: 537-543.
8. Hooshmand-Rad, R., et al. 2000. Platelet-derived growth factor-mediated signaling through the Shb adaptor protein: effects on cytoskeletal organization. Exp. Cell Res. 257: 245-254.
9. Rolny, C., et al. 2005. Shb promotes blood vessel formation in embryoid bodies by augmenting vascular endothelial growth factor receptor-2 and platelet-derived growth factor receptor-β signaling. Exp. Cell Res. 308: 381-393.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: Shf (mouse) mapping to 2 E5.

PRODUCT

Shf (m): 293T Lysate represents a lysate of mouse Shf transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Shf (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Shf antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

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