SANTA CRUZ BIOTECHNOLOGY, INC.

STAC3 (E-2): sc-514742

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Src homology 3 (SH3) domain is a highly conserved 60 amino acid protein domain that is organized into a β-barrel fold consisting of five or six β strands arranged as two tightly packed anti-parallel β sheets. This domain is found in proteins that mediate assembly of specific protein complexes and interact with other proteins, specifically recognizing proline-rich regions. STAC3 (SH3 and cysteine rich domain 3) is a 364 amino acid protein containing one phorbol-ester/DAG-type zinc finger and two SH3 (Src homology 3) domains. Existing as two alternatively spliced isoforms, STAC3 maps to human chromosome 12q13.3. Human chromosome 12 encodes over 1,400 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

1. Koch, C.A., et al. 1991. SH2 and SH3 domains: elements that control interactions of cytoplasmic signaling proteins. Science 252: 669-674.
2. Cicchetti, P., et al. 1992. Identification of a protein that binds to the SH3 region of Abl and is similar to Bcr and GAP-Rho. Science 257: 803-806.
3. Ren, R., et al. 1993. Identification of a ten-amino acid proline-rich SH3 binding site. Science 259: 1157-1161.
4. Pandey, A., et al. 1995. Characterization of a novel Src-like adapter protein that associates with the Eck receptor tyrosine kinase. J. Biol. Chem. 270: 19201-19204.
5. Liu, S.K. and McGlade, C.J. 1998. Gads is a novel SH2 and SH3 domain-containing adaptor protein that binds to tyrosine-phosphorylated Shc. Oncogene 17: 3073-3082.
6. Zumkeller, W., et al. 2004. Genotype/phenotype analysis in a patient with pure and complete trisomy 12p. Am. J. Med. Genet. A 129A: 261-264.
7. Scherer, S.E. 2006. The finished DNA sequence of human chromosome 12. Nature 440: 346-351.

CHROMOSOMAL LOCATION

Genetic locus: STAC3 (human) mapping to 12q13.3; Stac3 (mouse) mapping to 10 D3.

SOURCE

STAC3 (E-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 165-187 within an internal region of STAC3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514742 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

STAC3 (E-2) is recommended for detection of STAC3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for STAC3 siRNA (h): sc-95967, STAC3 siRNA (m): sc-153873, STAC3 shRNA Plasmid (h): sc-95967-SH, STAC3 shRNA Plasmid (m): sc-153873-SH, STAC3 shRNA (h) Lentiviral Particles: sc-95967-V and STAC3 shRNA (m) Lentiviral Particles: sc-153873-V.

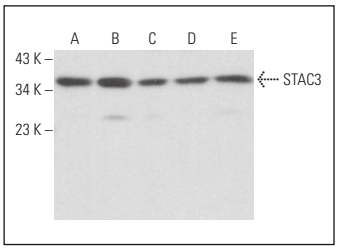
Molecular Weight of STAC3 isoform 1/2: 32/27 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188, BC_3H1 cell lysate: sc-2299 or SJRH30 cell lysate: sc-2287.

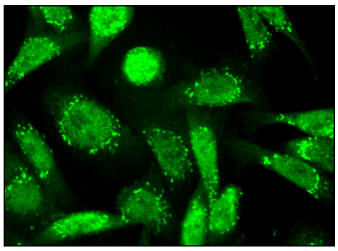
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



STAC3 (E-2): sc-514742. Western blot analysis of STAC3 expression in C2C12 (**A**), BC_3H1 (**B**), SJRH30 (**C**), A-673 (**D**) and A-10 (**E**) whole cell lysates.



STAC3 (E-2): sc-514742. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear and cytoplasmic vesicles localization.

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 for detailed protocols and support products.