SANTA CRUZ BIOTECHNOLOGY, INC.

STCH (N-16): sc-83336

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The heat shock proteins (HSPs) comprise a group of highly conserved, abundantly expressed proteins with diverse functions, which include the assembly and sequestering of multiprotein complexes, transportation of nascent polypeptide chains across cellular membranes and regulation of protein folding. Heat shock proteins (also known as molecular chaperones) fall into six general families: HSP 90, HSP 70, HSP 60, the low molecular weight HSPs, the immunophilins and the HSP 105 family. STCH, also known as HSPA13 (heat shock 70 kDa protein, member 13) or microsomal stress 70 protein ATPase core, is a 471 amino acid protein belonging to the HSP 70 protein family. Localized to the endoplasmic reticulum, STCH has peptide-independent ATPase activity. Fundamentally expressed in all tissues, STCH has been found to interact with PLIC-1 and PLIC-2, proteins involved in the signaling connection between the membrane receptors for Thrombospondin and the cytoskeleton.

REFERENCES

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3. Todd, M.J., et al. 1994. Dynamics of the chaperonin ATPase cycle: implications for facilitated protein folding. Science 265: 659-666.
4. Brodsky, G., et al. 1995. Localization of STCH to human chromosome 21q11.1. Genomics 30: 627-628.
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7. Chouchane, L., et al. 2001. Genetic variation in the stress protein HSP 70-2 gene is highly associated with obesity. Int. J. Obes. Relat. Metab. Disord. 25: 462-466.
8. Aoki, M., et al. 2005. A genetic variant in the gene encoding the stress 70 protein chaperone family member STCH is associated with gastric cancer in the Japanese population. Biochem. Biophys. Res. Commun. 335: 566-574.
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CHROMOSOMAL LOCATION

Genetic locus: HSPA13 (human) mapping to 21q11.2; Hspa13 (mouse) mapping to 16 C3.1.

SOURCE

STCH (N-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of STCH of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83336 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

STCH (N-16) is recommended for detection of STCH 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).

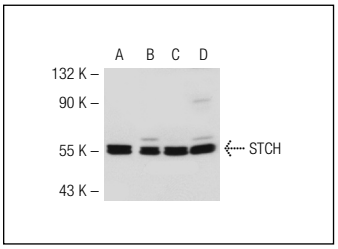
STCH (N-16) is also recommended for detection of STCH in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for STCH siRNA (h): sc-91484, STCH siRNA (m): sc-153884, STCH shRNA Plasmid (h): sc-91484-SH, STCH shRNA Plasmid (m): sc-153884-SH, STCH shRNA (h) Lentiviral Particles: sc-91484-V and STCH shRNA (m) Lentiviral Particles: sc-153884-V.

Molecular Weight of STCH: 60 kDa.

Positive Controls: U-937 cell lysate: sc-2239, Caco-2 cell lysate: sc-2262 or K-562 whole cell lysate: sc-2203.

DATA



STCH (N-16): sc-83336. Western blot analysis of STCH expression in HEK293 (**A**), U-937 (**B**), Caco-2 (**C**), A-431 (**D**), Hep G2 (**E**) and K-562 (**F**) whole cell lysates.

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.