SANTA CRUZ BIOTECHNOLOGY, INC.

ST7 (P-12): sc-160851

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ST7 (suppressor of tumorigenicity 7 protein), also known as HELG, RAY1, SEN4, TSG7, ETS7q or FAM4A1, is a 585 amino acid protein localized to the cell membrane. ST7 is ubiquitously expressed, with highest levels found in liver, heart and pancreas. Expressed as seven isoforms produced by alternative splicing events, ST7 may act as a tumor suppressor. The gene that encodes ST7 maps to human chromosome 7, which encodes over 1,000 genes and makes up about 5% of the human genome. Chromosome 7 has been linked to Osteogenesis imperfecta, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome. The deletion of a portion of the q arm of chromosome 7 is associated with Williams-Beuren syndrome, a condition characterized by mild mental retardation, an unusual comfort and friendliness with strangers and an elfin appearance. Deletions of portions of the q arm of chromosome 7 are also seen in a number of myeloid disorders including cases of acute myelogenous leukemia and myelodysplasia.

REFERENCES

1. Zenklusen, J.C., et al. 2001. Mutational and functional analyses reveal that ST7 is a highly conserved tumor-suppressor gene on human chromosome 7q31. Nat. Genet. 27: 392-398.
2. Brown, V.L., et al. 2002. Lack of mutations within ST7 gene in tumour-derived cell lines and primary epithelial tumours. Br. J. Cancer 87: 208-211.
3. Dong, S.M. and Sidransky, D. 2002. Absence of ST7 gene alterations in human cancer. Clin. Cancer Res. 8: 2939-2941.
4. Vincent, J.B., et al. 2002. The RAY1/ST7 tumor-suppressor locus on chromosome 7q31 represents a complex multi-transcript system. Genomics 80: 283-294.
5. Battle, M.A., et al. 2003. ST7 is a novel low-density lipoprotein receptor-related protein (LRP) with a cytoplasmic tail that interacts with proteins related to signal transduction pathways. Biochemistry 42: 7270-7282.

CHROMOSOMAL LOCATION

Genetic locus: ST7 (human) mapping to 7q31.2; St7 (mouse) mapping to 6 A2.

SOURCE

ST7 (P-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ST7 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.

Blocking peptide available for competition studies, sc-160851 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ST7 (P-12) is recommended for detection of ST7 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); non cross-reactive with ST7L.

ST7 (P-12) is also recommended for detection of ST7 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ST7 siRNA (h): sc-89831, ST7 siRNA (m): sc-153865, ST7 shRNA Plasmid (h): sc-89831-SH, ST7 shRNA Plasmid (m): sc-153865-SH, ST7 shRNA (h) Lentiviral Particles: sc-89831-V and ST7 shRNA (m) Lentiviral Particles: sc-153865-V.

Molecular Weight (predicted) of ST7 isoforms: 46-67 kDa.

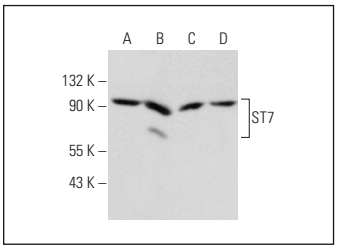
Molecular Weight (observed) of ST7: 93 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, ST7 (m): 293T Lysate: sc-123799 or SW480 cell lysate: sc-2219.

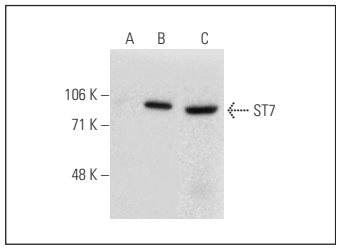
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ST7 (P-12): sc-160851. Western blot analysis of ST7 expression in Hep G2 (**A**), MIA PaCa-2 (**B**) and c4 (**C**) whole cell lysates and mouse pancreas tissue extract (**D**).



ST7 (P-12): sc-160851. Western blot analysis of ST7 expression in non-transfected 293T: sc-117752 (**A**), mouse ST7 transfected 293T: sc-123799 (**B**) and SW480 (**C**) whole cell lysates.

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.