SANTA CRUZ BIOTECHNOLOGY, INC.

CASZ1 (B-11): sc-398303

BACKGROUND

CASZ1 (castor zinc finger 1), also known as CST, SRG or ZNF693, is a 1,759 amino acid protein that localizes to the nucleus and contains eight C_2H_2-type zinc fingers. Expressed in stomach, lung, testis, pancreas, heart, skeletal muscle and small intestine, CASZ1 exists as multiple alternatively spliced isoforms and is thought to function as a transcription factor. Human CASZ1 shares over 85% sequence homology with its mouse counterpart, suggesting a conserved role between species. The gene encoding CASZ1 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

CHROMOSOMAL LOCATION

Genetic locus: CASZ1 (human) mapping to 1p36.22; Casz1 (mouse) mapping to 4 E2.

SOURCE

CASZ1 (B-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 913-926 within an internal region of CASZ1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-398303 X, 200 µg/0.1 ml.

CASZ1 (B-11) is available conjugated to agarose (sc-398303 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398303 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398303 PE), fluorescein (sc-398303 FITC), Alexa Fluor® 488 (sc-398303 AF488), Alexa Fluor® 546 (sc-398303 AF546), Alexa Fluor® 594 (sc-398303 AF594) or Alexa Fluor® 647 (sc-398303 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398303 AF680) or Alexa Fluor® 790 (sc-398303 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398303 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

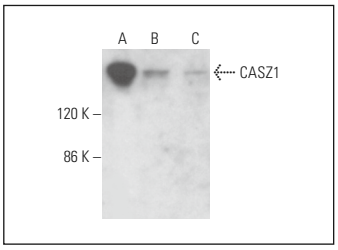
CASZ1 (B-11) is recommended for detection of CASZ1 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 CASZ1 siRNA (h): sc-78956, CASZ1 siRNA (m): sc-142024, CASZ1 shRNA Plasmid (h): sc-78956-SH, CASZ1 shRNA Plasmid (m): sc-142024-SH, CASZ1 shRNA (h) Lentiviral Particles: sc-78956-V and CASZ1 shRNA (m) Lentiviral Particles: sc-142024-V.

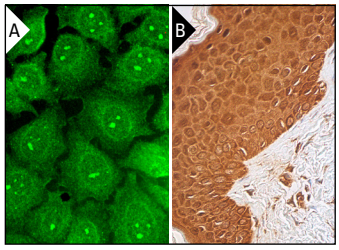
CASZ1 (B-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of CASZ1: 190 kDa.

DATA



CASZ1 (B-11): sc-398303. Western blot analysis of CASZ1 expression in BC_3H1 (**A**), SJRH30 (**B**) and C2C12 (**C**) whole cell lysates.



CASZ1 (B-11): sc-398303. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic, nucleolar and nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic and nuclear staining of keratinocytes, fibroblasts, Langerhans cells and Melanocytes (**B**).

SELECT PRODUCT CITATIONS

1. Xu, L., et al. 2017. Effects of CASZI on bronchopulmonary development of neonatal rats. Exp. Ther. Med. 14: 6243-6246.
2. Dedoni, S., et al. 2020. Valproic acid upregulates the expression of the p75NTR/sortilin receptor complex to induce neuronal apoptosis. Apoptosis 25: 697-714.
3. Dedoni, S., et al. 2022. Upregulation of p75NTR by histone deacetylase inhibitors sensitizes human neuroblastoma cells to targeted immunotoxin-induced apoptosis. Int. J. Mol. Sci. 23: 3849.
4. Taheri Baghmisheh, S., et al. 2023. CASZ1 promotes migration, invasion, and metastasis of lung cancer cells by controlling expression of ITGAV. Am. J. Cancer Res. 13: 176-189.
5. Tuano, N.K., et al. 2023. CRISPR screens identify gene targets at breast cancer risk loci. Genome Biol. 24: 59.

RESEARCH USE

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