SANTA CRUZ BIOTECHNOLOGY, INC.

GLI-1 (H-300): sc-20687

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. GLI-1 (GLI family zinc finger 1), also known as Glioma-associated oncogene or oncogene GLI, is a 1,106 amino acid protein that localizes to both the cytoplasm and nucleus, and belongs to the GLI C_2H_2-type zinc-finger protein family. GLI-1 acts as a transcriptional activator and is thought to play a role in craniofacial development. GLI-1 exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 12q13.3.

CHROMOSOMAL LOCATION

Genetic locus: GLI1 (human) mapping to 12q13.3; Gli1 (mouse) mapping to 10 D3.

SOURCE

GLI-1 (H-300) is a rabbit polyclonal antibody raised against amino acids 781-1080 of GLI-1 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.

Available as agarose conjugate for immunoprecipitation, sc-20687 AC, 500 µg/0.25 ml agarose in 1 ml; available as TransCruz reagent for Gel Supershift and ChIP applications, sc-20687 X, 200 µg/0.1 ml.

APPLICATIONS

GLI-1 (H-300) is recommended for detection of GLI-1 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), 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).

GLI-1 (H-300) is also recommended for detection of GLI-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GLI-1 siRNA (h): sc-37911, GLI-1 siRNA (m): sc-37912, GLI-1 shRNA Plasmid (h): sc-37911-SH, GLI-1 shRNA Plasmid (m): sc-37912-SH, GLI-1 shRNA (h) Lentiviral Particles: sc-37911-V and GLI-1 shRNA (m) Lentiviral Particles: sc-37912-V.

GLI-1 (H-300) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of GLI-1: 118 kDa.

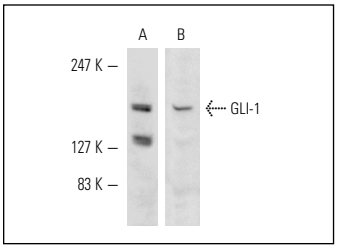
Molecular Weight (observed) of GLI-1: 114-173 kDa.

Positive Controls: F9 cell lysate: sc-2245 or K-562 nuclear extract: sc-2130.

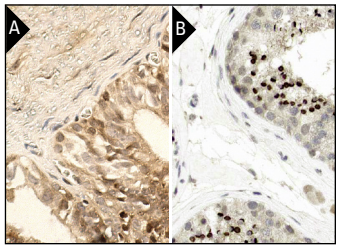
STORAGE

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

DATA



GLI-1 (H-300): sc-20687. Western blot analysis of GLI-1 expression in F9 whole cell lysate (**A**) and K-562 nuclear extract (**B**).



GLI-1 (H-300): sc-20687. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of ductus seminiferus cells and cytoplasmic staining of Leydig cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Argenti, B., et al. 2005. Hedgehog antagonist REN(KCTD11) regulates proliferation and apoptosis of developing granule cell progenitors. J. Neurosci. 25: 8338-8346.
2. Cui, D., et al. 2010. Gli1 is a potential target for alleviating multidrug resistance of gliomas. J. Neurol. Sci. 288: 156-166.
3. Chan, D.W., et al. 2011. Zic2 synergistically enhances Hedgehog signalling through nuclear retention of Gli1 in cervical cancer cells. J. Pathol. 225: 525-534.
4. O'Toole, S.A., et al. 2011. Hedgehog overexpression is associated with stromal interactions and predicts for poor outcome in breast cancer. Cancer Res. 71: 4002-4014.
5. Di Marcotullio, L., et al. 2011. Numb activates the E3 ligase Itch to control Gli1 function through a novel degradation signal. Oncogene 30: 65-76.
6. Song, Z., et al. 2011. Sonic hedgehog pathway is essential for maintenance of cancer stem-like cells in human gastric cancer. PLoS ONE 6: e17687.
7. Leovic, D., et al. 2012. Hh-Gli signaling pathway activity in oral and oropharyngeal squamous cell carcinoma. Head Neck 34: 104-112.

RESEARCH USE

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