

GLI-1 (A-7): sc-515781

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 C₂H₂-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 (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1050-1068 near the C-terminus of GLI-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-515781 X, 200 µg/0.1 ml.

APPLICATIONS

GLI-1 (A-7) is recommended for detection of GLI-1 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 GLI-1 siRNA (h): sc-37911, GLI-1 siRNA (m): sc-37912, GLI-1 siRNA (r): sc-270268, GLI-1 shRNA Plasmid (h): sc-37911-SH, GLI-1 shRNA Plasmid (m): sc-37912-SH, GLI-1 shRNA Plasmid (r): sc-270268-SH, GLI-1 shRNA (h) Lentiviral Particles: sc-37911-V, GLI-1 shRNA (m) Lentiviral Particles: sc-37912-V and GLI-1 shRNA (r) Lentiviral Particles: sc-270268-V.

GLI-1 (A-7) 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: A-673 cell lysate: sc-2414, SK-N-MC cell lysate: sc-2237 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

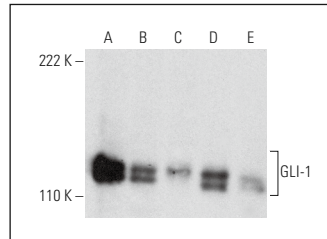
RESEARCH USE

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

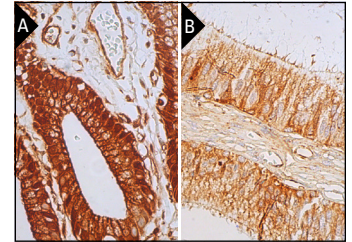
STORAGE

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

DATA



GLI-1 (A-7): sc-515781. Western blot analysis of GLI-1 expression in SK-N-MC (A), NCI-H292 (B), NTERA-2 cl.D1 (C), A-673 (D) and U-87 MG (E) whole cell lysates.



GLI-1 (A-7): sc-515781. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and nuclear staining of glandular cells (A) and human epididymis tissue showing cytoplasmic staining of glandular cells (B). Blocked with 0.25X UltraCruz[®] Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz[®] ABC Kit: sc-516216.

SELECT PRODUCT CITATIONS

- Ding, X., et al. 2019. SCP2-mediated cholesterol membrane trafficking promotes the growth of pituitary adenomas via Hedgehog signaling activation. *J. Exp. Clin. Cancer Res.* 38: 404.
- Asha, K., et al. 2020. Concurrent control of KSHV life cycle through chromatin modulation and host Hedgehog signaling: a new prospect to the therapeutic potential of lipoxin A4. *J. Virol.* 94: e02177-19.
- Siddharth, S., et al. 2021. Concomitant activation of GLI-1 and Notch1 contributes to racial disparity of human triple negative breast cancer progression. *Elife* 10: e70729.
- Uehara, K., et al. 2022. Epithelial-derived factors induce muscularis mucosa of human induced pluripotent stem cell-derived gastric organoids. *Stem Cell Reports* 17: 820-834.
- Liu, J., et al. 2022. IL25 enhanced colitis-associated tumorigenesis in mice by upregulating transcription factor GLI-1. *Front. Immunol.* 13: 837262.
- Li, Q., et al. 2024. P4HA2 hydroxylates SUFU to regulate the paracrine Hedgehog signaling and promote B-cell lymphoma progression. *Leukemia* 38: 1751-1763.
- Ortega-Carballo, K.J., et al. 2024. Characterization of a model of liver regeneration: Role of hedgehog signaling in experimental hepatic amoebiasis. *Pathol. Res. Pract.* 260: 155452.
- Bordin, F., et al. 2024. SMURF1 and SMURF2 directly target GLI1 for ubiquitination and proteasome-dependent degradation. *Cell Death Discov.* 10: 498.

PROTOCOLS

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