

GLI-1 (C-1): sc-515751

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.

REFERENCES

1. Kinzler, K.W., et al. 1988. The GLI gene is a member of the Krüppel family of zinc finger proteins. *Nature* 332: 371-374.
2. Pavletich, N.P. and Pabo, C.O. 1993. Crystal structure of a five-finger GLI-DNA complex: new perspectives on zinc fingers. *Science* 261: 1701-1707.
3. Wang, X.Q., et al. 2000. Letters to the editor: identification of polymorphic variants of the GLI-1 oncogene. *J. Invest. Dermatol.* 115: 328-329.
4. Murone, M., et al. 2000. GLI regulation by the opposing activities of fused and suppressor of fused. *Nat. Cell Biol.* 2: 310-312.

CHROMOSOMAL LOCATION

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

SOURCE

GLI-1 (C-1) is a mouse monoclonal antibody raised against amino acids 781-1080 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-515751 X, 200 µg/0.1 ml.

GLI-1 (C-1) is available conjugated to agarose (sc-515751 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515751 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515751 PE), fluorescein (sc-515751 FITC), Alexa Fluor[®] 488 (sc-515751 AF488), Alexa Fluor[®] 546 (sc-515751 AF546), Alexa Fluor[®] 594 (sc-515751 AF594) or Alexa Fluor[®] 647 (sc-515751 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515751 AF680) or Alexa Fluor[®] 790 (sc-515751 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

GLI-1 (C-1) 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) 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.

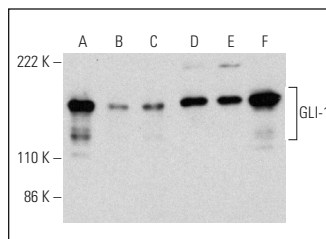
GLI-1 (C-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

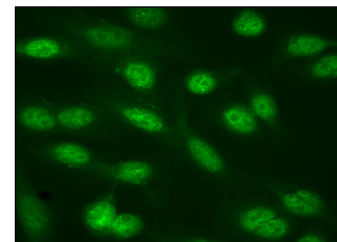
Molecular Weight (observed) of GLI-1: 114-173 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, U-87 MG cell lysate: sc-2411 or SK-N-MC cell lysate: sc-2237.

DATA



GLI-1 (C-1): sc-515751. Western blot analysis of GLI-1 expression in SK-N-MC (A), U-87 MG (B), Saos-2 (C), PC-3 (D) and NTERA-2 cl.D1 (E) whole cell lysates and K-562 nuclear extract (F).



GLI-1 (C-1) Alexa Fluor[®] 488: sc-515751 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization. Blocked with UltraCruz[®] Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Quaranta, R., et al. 2017. Maml1 acts cooperatively with GLI proteins to regulate Sonic Hedgehog signaling pathway. *Cell Death Dis.* 8: e2942.
2. Abe, Y., et al. 2019. MEP50/PRMT5-mediated methylation activates GLI1 in Hedgehog signalling through inhibition of ubiquitination by the ITCH/NUMB complex. *Commun. Biol.* 2: 23.
3. Qin, X., et al. 2020. Cell-type-specific signaling networks in heterocellular organoids. *Nat. Methods* 17: 335-342.
4. Prall, O.W.J., et al. 2020. A malignant neoplasm from the jejunum with a MALAT1-GLI1 fusion and 26-year survival history. *Int. J. Surg. Pathol.* E-published.

RESEARCH USE

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