SANTA CRUZ BIOTECHNOLOGY, INC.

GLI-3 (H-280): sc-20688

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-3 (GLI family zinc finger 3), also known as GLI3FL (GLI3 full length protein), PHS, ACLS, GCPS, PAPA, PAPB, PAPA1 or PPDIV, is a 1,580 amino acid nuclear and cytoplasmic protein that acts as both a transcriptional activator and a repressor of the Sonic hedgehog (Shh) pathway. A member of the GLI C_2H_2-type zinc-finger protein family, GLI-3 is encoded by a gene that maps to human chromosome 7p14.1. Defects in the GLI-3 gene are the cause of a disorder known as Greig cephalo-poly-syndactyly syndrome (GCPS), which affects limb and craniofacial development.

CHROMOSOMAL LOCATION

Genetic locus: GLI3 (human) mapping to 7p14.1; Gli3 (mouse) mapping to 13 A1.

SOURCE

GLI-3 (H-280) is a rabbit polyclonal antibody raised against amino acids 1-280 of GLI-3 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-20688 AC, 500 µg/0.25 ml agarose in 1 ml.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-20688 X, 200 µg/0.1 ml.

APPLICATIONS

GLI-3 (H-280) is recommended for detection of GLI-3 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-3 (H-280) is also recommended for detection of GLI-3 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for GLI-3 siRNA (h): sc-35483, GLI-3 siRNA (m): sc-35484, GLI-3 shRNA Plasmid (h): sc-35483-SH, GLI-3 shRNA Plasmid (m): sc-35484-SH, GLI-3 shRNA (h) Lentiviral Particles: sc-35483-V and GLI-3 shRNA (m) Lentiviral Particles: sc-35484-V.

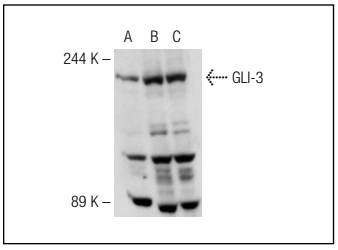
GLI-3 (H-280) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GLI-3: 190 kDa.

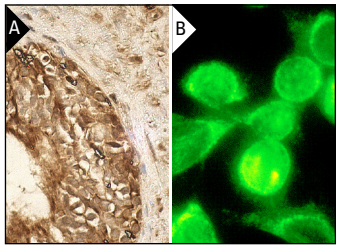
STORAGE

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

DATA



GLI-3 (H-280): sc-20688. Western blot analysis of GLI-3 expression in K-562 (**A**), Jurkat (**B**) and Y79 (**C**) whole cell lysates.



GLI-3 (H-280): sc-20688. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts (**A**). Immunofluorescence staining of methanol-fixed SW480 cells showing nuclear or cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Zhou, H., et al. 2006. Mediator modulates GLI-3-dependent sonic hedgehog signaling. Mol. Cell. Biol. 26: 8667-8682.
2. Fotaki, V., et al. 2006. Abnormal positioning of diencephalic cell types in neocortical tissue in the dorsal telencephalon of mice lacking functional Gli3. J. Neurosci. 26: 9282-9292.
3. Hatsell, S.J. and Cowin, P. 2006. Gli3-mediated repression of Hedgehog targets is required for normal mammary development. Development 133: 3661-3670.
4. Xuan, Y.H., et al. 2006. Enhanced expression of hedgehog signaling molecules in squamous cell carcinoma of uterine cervix and its precursor lesions. Mod. Pathol. 19: 1139-1147.
5. Brunner, M., et al. 2010. Expression of hedgehog signaling molecules in Merkel cell carcinoma. Head Neck 32: 333-340.
6. Doi, T., et al. 2011. Disruption of GLI3-ZIC3 interaction in the cadmium-induced omphalocele chick model. Pediatr. Surg. Int. 27: 205-209.
7. Yu, T., et al. 2011. Sprouty genes prevent excessive FGF signalling in multiple cell types throughout development of the cerebellum. Development 138: 2957-2968.

RESEARCH USE

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