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GLI1 Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21920a

Product Information

Application	WB, E
Primary Accession	P08151
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB54395
Calculated MW	117904

Additional Information

Gene ID	2735
Other Names	Zinc finger protein GLI1, Glioma-associated oncogene, Oncogene GLI, GLI1, GLI
Target/Specificity	This GLI1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 196-230 amino acids from human GLI1.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GLI1 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GLI1 {ECO:0000303|PubMed:19706761, ECO:0000312|HGNC:HGNC:4317}
Function	Transcription activator that acts as a key effector of the smoothened signaling pathway, and which plays a role in craniofacial development and digital development, as well as development of the central nervous system and gastrointestinal tract (PubMed:10806483, PubMed:11238441,

PubMed:19706761, PubMed:19878745, PubMed:24076122, PubMed:24217340, PubMed:24311597, PubMed:28973407). Binds to the DNA consensus sequence 5'-GACCACCCA-3' (PubMed:2105456, PubMed:24217340, PubMed:2832761, PubMed:8378770). Activated in response to smoothened signaling: in presence of hedgehog (DHH, IHH or SHH) and subsequent activation of smoothened, GLI1 translocates to the nucleus and promotes expression of target genes (PubMed:2105456). In contrast to GLI2 and GLI3, does not contain a repressor domain and only acts as a transcription activator (PubMed:10075717).

Cellular Location

Cytoplasm. Nucleus. Cell projection, cilium {ECO:0000250|UniProtKB:P47806}. Note=Sequestered in the cytoplasm by SUFU in absence of smoothened signaling (PubMed:10806483, PubMed:10559945). Accumulates in primary cilia following smoothened activation (By similarity). It then translocates to the nucleus, where is activates transcription of target genes (PubMed:10806483, PubMed:24311597, PubMed:35831023). Activation and translocation to the nucleus is promoted by interaction with STK36 (PubMed:10806483). Phosphorylation by ULK3 may promote nuclear localization (PubMed:19878745). Translocation to the nucleus is promoted by interaction with ZIC1 (PubMed:11238441) {ECO:0000250|UniProtKB:P47806, ECO:0000269|PubMed:10559945, ECO:0000269|PubMed:10806483, ECO:0000269|PubMed:11238441, ECO:0000269|PubMed:19878745, ECO:0000269|PubMed:24311597, ECO:0000269|PubMed:35831023}

Tissue Location

Detected in testis (at protein level) (PubMed:2105456). Testis, myometrium and fallopian tube. Also expressed in the brain with highest expression in the cerebellum, optic nerve and olfactory tract (PubMed:19878745). Isoform 1 is detected in brain, spleen, pancreas, liver, kidney and placenta; isoform 2 is not detectable in these tissues (PubMed:19706761)

Background

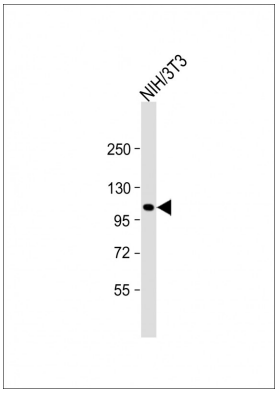
Acts as a transcriptional activator. May regulate the transcription of specific genes during normal development. May play a role in craniofacial development and digital development, as well as development of the central nervous system and gastrointestinal tract. Mediates SHH signaling and thus cell proliferation and differentiation.

References

Kinzler K.W.,et al.Nature 332:371-374(1988).
Yoon J.W.,et al.Submitted (OCT-2000) to the EMBL/GenBank/DDBJ databases.
Lo H.W.,et al.Cancer Res. 69:6790-6798(2009).
Scherer S.E.,et al.Nature 440:346-351(2006).
Murone M.,et al.Nat. Cell Biol. 2:310-312(2000).

Images

Anti-GLI1 Antibody (N-Term) at 1:2000 dilution + NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 118 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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