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GLI1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2089a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P08151
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1B9F8
Isotype	IgG1
Calculated MW	117904
Description	This gene encodes a member of the Kruppel family of zinc finger proteins. The encoded transcription factor is activated by the sonic hedgehog signal transduction cascade and regulates stem cell proliferation. The activity and nuclear localization of this protein is negatively regulated by p53 in an inhibitory loop. Multiple transcript variants encoding different isoforms have been found for this gene.
Immunogen	Purified recombinant fragment of human GLI1 (AA: 284-449) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	2735
Other Names	Zinc finger protein GLI1, Glioma-associated oncogene, Oncogene GLI, GLI1, GLI
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GLI1 Antibody 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)

References

1.Mol Cancer. 2014 Jun 3;13:137.2.J Hematol Oncol. 2014 Mar 30;7:28.

Images

