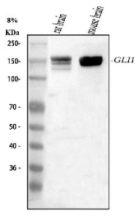
GLI1 Antibody / Glioma-associated oncogene homolog 1 (FY12192)

Catalog No.	Formulation	Size
FY12192	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P08151
Applications	Western Blot: 0.25-0.5ug/ml ELISA: 0.1-0.5ug/ml
Limitations	This GLI1 antibody is available for research use only.



Western blot analysis of GLI1 using anti-GLI1 antibody. Lane 1: rat brain tissue lysates, Lane 2: mouse brain tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GLI1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected band size for GLI1 is 100-160 kDa.

Description

GLI1 antibody detects Glioma-associated oncogene homolog 1, encoded by the GLI1 gene on chromosome 12q13.3. GLI1 antibody is used in research on developmental signaling, transcriptional regulation, and cancer biology. GLI1 is a zinc finger transcription factor and a key effector of the Hedgehog signaling pathway, which controls cell fate, proliferation, and differentiation during embryogenesis. Aberrant activation of GLI1 contributes to tumorigenesis, particularly in basal cell carcinoma, medulloblastoma, and other cancers. GLI1 expression is found in embryonic tissues, stem cells, and

tumor cells, with tightly regulated activity in development and disease.

Structurally, GLI1 contains five C2H2-type zinc finger DNA-binding motifs that recognize consensus sequences in Hedgehog target genes. Its N-terminal region regulates transcriptional activity, while the C-terminal domain contains transactivation motifs. GLI1 functions as a transcriptional activator, unlike GLI2 and GLI3 which can act as both activators and repressors. Regulation of GLI1 involves nuclear-cytoplasmic shuttling, post-translational modifications, and interaction with cofactors.

Functionally, GLI1 activates transcription of genes controlling proliferation, survival, and differentiation. In development, it directs patterning of the nervous system, limbs, and other organs. In adult tissues, GLI1 is normally quiescent but can be reactivated in stem cell niches. Dysregulation results in uncontrolled proliferation and cancer initiation. Researchers use GLI1 antibody to study Hedgehog signaling, transcriptional control, and oncogenesis.

Clinically, GLI1 is strongly linked to cancer. Overexpression or constitutive activation drives tumor growth in basal cell carcinoma, medulloblastoma, gliomas, and pancreatic cancer. GLI1 serves as a biomarker of Hedgehog pathway activity and a therapeutic target in oncology. Inhibitors targeting upstream components such as Smoothened indirectly reduce GLI1 activity, while direct GLI inhibitors are in development. GLI1 is also associated with developmental disorders caused by Hedgehog pathway disruption. NSJ Bioreagents provides GLI1 antibody for reliable detection in developmental biology and oncology research.

Experimentally, GLI1 antibody is used in western blotting to detect the ~110 kDa protein, in immunohistochemistry to analyze tumor expression, and in immunofluorescence microscopy to study nuclear localization. Immunoprecipitation with GLI1 antibody enables analysis of transcriptional complexes and cofactors. These applications provide a versatile toolkit for dissecting Hedgehog pathway regulation.

Application Notes

Optimal dilution of the GLI1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human GLI1 recombinant protein (Position: Y800-Q1057) was used as the immunogen for the GLI1 antibody.

Storage

After reconstitution, the GLI1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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