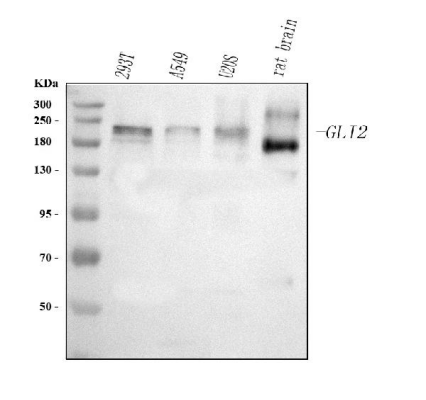
GLI2 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

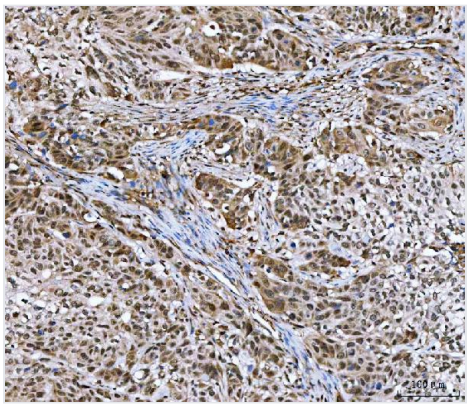
Product Name	GLI2, Polyclonal Antibody
Full Product Name	Anti-GLI2 Antibody Picoband
Product Gene Name	anti-GLI2 antibody
Product Synonym Names	cAMP-dependent protein kinase type I-alpha regulatory subunit; GLI family zinc finger 2; Zinc finger protein GLI2; GLI family zinc finger protein 2; Tax helper protein; GLI2; THP
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Rat
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Specificity	Expressed in breast cancers. Isoform 1 and isoform 4 areExpressed in HTLV-1-infected T-cell lines. Isoform 1 and isoform 2 are stronglyExpressed in HTLV-1-infected T-cell lines. Isoform 3 and isoform 4 are weaklyExpressed in HTLV-1-infected T-cell lines.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.
Molecular Weight	86,482 Da
OMIM	615849
3D Structure	ModBase 3D Structure for P10070
Immunogen	E coli-derived human GLI2 recombinant protein (Position: A46-A1398).
Subcellular Localization	Nucleus, Cytoplasm, Cilium
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.
Protein Function	Functions as transcription regulator in the hedgehog (Hh) pathway. Functions as transcriptional activator. May also function as transcriptional repressor. Requires STK36 for full transcriptional activator activity. Required for normal embryonic development. Act as transcriptional activators in T-cell leukemia virus type 1 (HTLV-1)-infected cells in a Tax-dependent manner. Bind to the DNA sequence 5'-GAACCACCCA-3' which is part of the Tax-responsive element (TRE-2S) regulatory element that augments the Tax-dependent enhancer of HTLV-1. Are involved in the smoothened (SHH) signaling pathway. Acts as a transcriptional repressor.
Product Categories/Family for anti-GLI2 antibody	Primary Antibodies; Cancer; Cell Cycle; DNA/RNA; Epigenetics and Nuclear Signaling; Kinases/Phosphatases; Nuclear Import/Export; Protein Trafficking; RNA Processing; Signal Transduction
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-GLI2 antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunocytochemistry (ICC), Immunofluorescence (IF), Flow Cytometry (FC/FACS), ELISA (EIA)

Application Notes for anti-GLI2 antibody	WB: 0.25-0.5ug/ml, Human, Rat IHC(Paraffin-embedded Section): 2-5ug/ml, Human ICC/IF: 5ug/ml, Human FC/FACS (Fixed): 1-3ug/1x10^6 cells, Human ELISA: 0.1-0.5ug/ml
Related Product Information for anti-GLI2 antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product References and Citations for anti-GLI2 antibody	1. Bertolacini, C. D. P., Ribeiro-Bicudo, L. A., Petrin, A., Richieri-Costa, A., Murray, J. C. Clinical findings in patients with GLI2 mutations--phenotypic variability. Clin. Genet. 81: 70-75, 2012.2. Matsumoto, N., Fujimoto, M., Kato, R., Niikawa, N. Assignment of the human GLI2 gene to 2q14 by fluorescence in situ hybridization. Genomics 36: 220-221, 1996.3. Roessler, E., Ermilov, A. N., Grange, D. K., Wang, A., Grachtchouk, M., Dlugosz, A. A., Muenke, M. A previously unidentified amino-terminal domain regulates transcriptional activity of wild-type and disease-associated human GLI2. Hum. Molec. Genet. 14: 2181-2188, 2005.
Other Notes	Small volumes of anti-GLI2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for GLI2 purchase	MBS1758103 is an antibody targeting GLI2. Also known as Anti-GLI2 Antibody Picoband. Reactive in Human, Rat. Host: Rabbit.



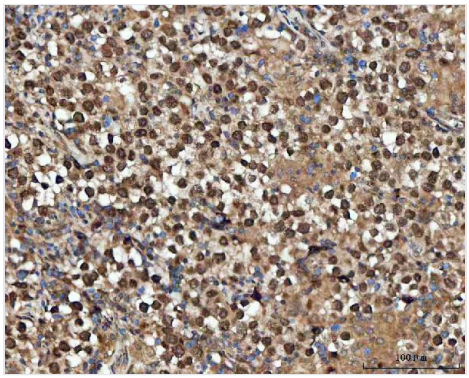
Western Blot (WB) of anti-GLI2 antibody

Figure 1. Western blot analysis of GLI2 using anti-GLI2 antibody (MBS1758103).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human 293T whole cell lysates,Lane 2: human A549 whole cell lysates,Lane 3: human U20S whole cell lysates,Lane 4: rat 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-GLI2 antigen affinity purified polyclonal antibody (#MBS1758103) at 0.5ug/mL overnight at 4 degree C, 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 is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for GLI2 at approximately 180-200 kDa. The expected band size for GLI2 is at 220 kDa.



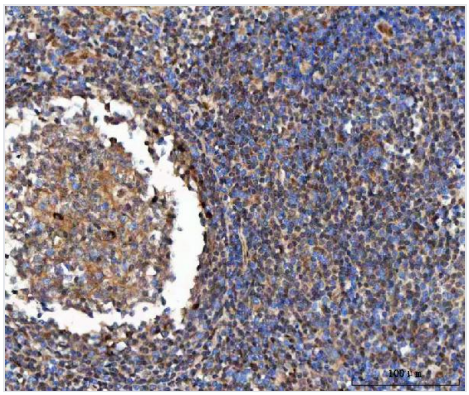
Immunohistochemistry (IHC) of anti-GLI2 antibody

Figure 2. IHC analysis of GLI2 using anti-GLI2 antibody (MBS1758103).GLI2 was detected in a paraffin-embedded section of human esophageal squamous carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-GLI2 Antibody (MBS1758103) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (#MBS176453) with DAB as the chromogen.



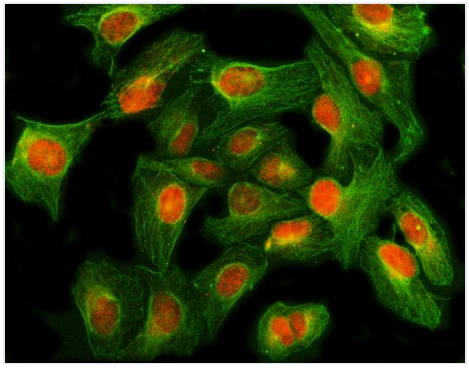
Immunohistochemistry (IHC) of anti-GLI2 antibody

Figure 3. IHC analysis of GLI2 using anti-GLI2 antibody (MBS1758103).GLI2 was detected in a paraffin-embedded section of human testicular germ cell tumors tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-GLI2 Antibody (MBS1758103) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (#MBS176453) with DAB as the chromogen.



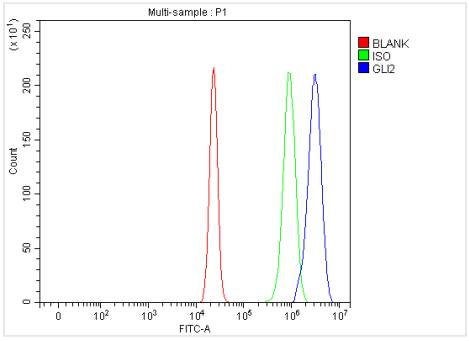
Immunohistochemistry (IHC) of anti-GLI2 antibody

Figure 4. IHC analysis of GLI2 using anti-GLI2 antibody (MBS1758103).GLI2 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-GLI2 Antibody (MBS1758103) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (#MBS176453) with DAB as the chromogen.



Immunofluorescence (IF) of anti-GLI2 antibody

Figure 5. IF analysis of GLI2 using anti-GLI2 antibody (MBS1758103) and anti-Beta Tubulin antibody (M01857-3).GLI2 was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (#MBS176582) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-GLI2 Antibody (MBS1758103) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4 degree C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) and DyLight488 Conjugated Goat Anti-Mouse IgG (BA1126) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37 degree C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry (FC/FACS) of anti-GLI2 antibody

Figure 6. Flow Cytometry analysis of U20S cells using anti-GLI2 antibody (MBS1758103).Overlay histogram showing U20S cells stained with MBS1758103 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-GLI2 Antibody (MBS1758103, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for GLI2. It may not necessarily be applicable to this product.

NCBI GI #	215274258
NCBI GeneID	2736
NCBI Accession #	P10070.4
UniProt Primary Accession #	P10070
UniProt Secondary Accession #	O60252; O60253; O60254; O60255; Q15590; Q15591; Q4JHT4
UniProt Related Accession #	P10070
NCBI Official Full Name	Zinc finger protein GLI2
NCBI Official Synonym Full Names	GLI family zinc finger 2
NCBI Official Symbol	GLI2

NCBI Official Synonym Symbols	HPE9; PHS2; THP1; THP2
UniProt Protein Name	Zinc finger protein GLI2
UniProt Synonym Protein Names	GLI family zinc finger protein 2; Tax helper protein
Protein Family	Zinc finger protein
UniProt Gene Name	GLI2
UniProt Entry Name	GLI2_HUMAN
NCBI Protein Information	zinc finger protein GLI2; oncogene GLI2; tax helper protein 1; tax helper protein 2; GLI-Kruppel family member GLI2; tax-responsive element-2 holding protein; glioma-associated oncogene family zinc finger 2; tax-responsive element-25-bp sequence binding p
NCBI Summary for GLI2	This gene encodes a protein which belongs to the C2H2-type zinc finger protein subclass of the Gli family. Members of this subclass are characterized as transcription factors which bind DNA through zinc finger motifs. These motifs contain conserved H-C links. Gli family zinc finger proteins are mediators of Sonic hedgehog (Shh) signaling and they are implicated as potent oncogenes in the embryonal carcinoma cell. The protein encoded by this gene localizes to the cytoplasm and activates patched Drosophila homolog (PTCH) gene expression. It is also thought to play a role during embryogenesis. The encoded protein is associated with several phenotypes- Greig cephalopolysyndactyly syndrome, Pallister-Hall syndrome, preaxial polydactyly type IV, postaxial polydactyly types A1 and B. [provided by RefSeq, Jul 2008]
UniProt Comments for GLI2	Functions as transcription regulator in the hedgehog (Hh) pathway (PubMed:18455992). Functions as transcriptional activator (PubMed:9557682, PubMed:19878745, PubMed:24311597). May also function as transcriptional repressor (). Requires STK36 for full transcriptional activator activity. Required for normal embryonic development (PubMed:15994174, PubMed:20685856).
Research Articles on GLI2	**1.** The transcription factors GLI1 and GLI2 activate the SOCS1 promoter, which contains five putative GLI binding sites, and GLI2 binding to the promoter was shown by chromatin immunoprecipitation.
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