

**Certificate of Analysis**
**Product:** Anti-Gli-1 (Rabbit)

**Code:** 100-401-223

**Lot #:** 18762

**Size:** 100 µl

**Physical State:** Liquid (sterile filtered)

**Protein Concentration:** 70 mg/ml (by Refractometry)

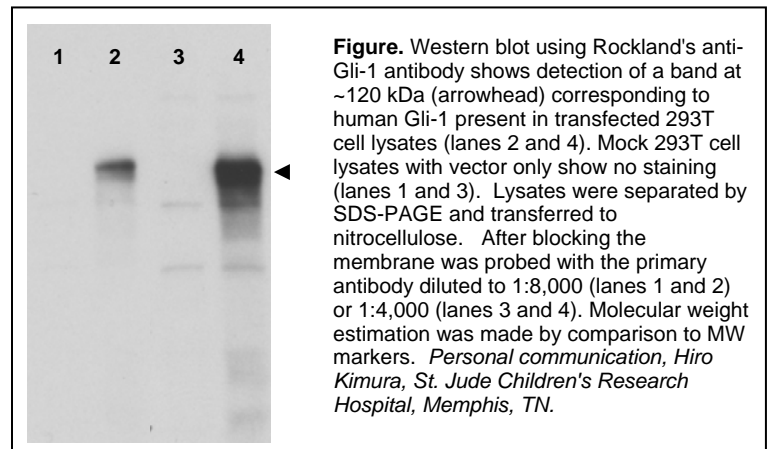
**Buffer:** 0.02 M Potassium Phosphate, 0.15 M NaCl, pH 7.2

**Stabilizer:** None

**Preservative:** 0.01% (w/v) Sodium Azide

**Storage Conditions:** Store vial at -20° C prior to opening. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening.

**Background Information:** This antiserum was produced against a peptide corresponding to the carboxy-terminal region of the mouse Gli-1 protein. This region is not conserved among other *gli* family members, namely Gli-2 and Gli-3. Gli was termed by Kinzler et al. (1987) as 'glioma-associated oncogene' amplified in malignant gliomas. Analysis of the cloned gene demonstrates that the gene contains 5 repeats of zinc-finger sequences, which places Gli in the family of Kruppel (Kr) zinc finger proteins. Northern analysis reveals that Gli is expressed in embryonal carcinoma cells but not in most adult tissue. Gli has been localized to 12q13-q14.3 by Southern blot analysis. In mice, the gene is located on chromosome 10. In mice, three zinc finger transcription factors, Gli-1, Gli-2 and Gli-3, have been implicated in the transduction of Sonic hedgehog (Shh) signal. In papillary epithelium, *shh*, *gli1* and *ptc* all follow similar expression patterns. Gli-1 expression is central and probably sufficient for tumor development in humans.



**Application Note(s):** This antibody has been tested for use in ELISA, immunohistochemistry and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 120 kDa in size corresponding to Gli-1 protein by western blotting in the appropriate cell lysate or extract. For immunohistochemistry, perform heat mediated antigen retrieval via the microwave method before commencing with staining.

<b>Recommended Dilutions:</b>	<b>ELISA</b>	1:20,000 - 1:100,000
	<b>WESTERN BLOT</b>	1:2,000 - 1:10,000
	<b>IMMUNOHISTOCHEMISTRY</b>	1:500 - 1:2,000
	<b>OTHER APPLICATIONS</b>	User Optimized

**Purity and Specificity:** This whole rabbit antiserum was prepared by delipidation and defibrination followed by the addition of buffer salts and preservative. Reactivity is observed against Mouse and Human Gli-1. Cross-reactivity with other species is likely but has not been determined. No reaction occurs with human or mouse Gli-2 or Gli-3.

**Relevant Link(s):** Swiss Prot: [P47806](#) (Mouse)      NCBI Link [NP\\_005260](#) (Human)

**Immunogen:** The whole rabbit serum was prepared by repeated immunizations with a synthetic peptide corresponding to amino acids 805-820 of mouse Gli-1. The peptide was synthesized as a multiple antigen peptide (MAP).

**Protein Sequence:** Mouse Gli-1, 1111 aa, predicted MW 118.5 kDa

1	mfnpmtpqqv	nsysepcclr	plhsqgvpsm	gteglsglpf	chqanfmmsg	qgygaarets
61	sctegslfpp	pppprsvkl	tkkralsisp	lsdasldlqt	virtspsslv	afinsrctsp
121	ggsyghlsig	tmspslgfpp	qmshqkgtsp	pygvqpcvph	dstrgsmmllh	pqargpratc
181	qlkseldmmv	gkcpedpleg	dmsspntgi	qdhlglmldg	redlereekp	epesvyetdc
241	rdwgcsgqefd	sgeqlvhhin	sehihgerke	fvchwggcsr	elrpfkaqym	lvvhmrrhtg
301	ekphkctfeg	crksysrlen	lkthlrshgt	ekpymceqeg	cskafsnasd	rakhqnrths
361	nekpyvcklp	gctkrytdps	slrkhvktvh	gpdahvtrkh	rgdglpraq	plstvepkre
421	reggsrees	rltvpesamp	qqspgagssc	ssdhspagsa	antdsgvema	gnaggstedl
481	ssldegpcvs	atglstlrl	enlrldqlhq	lrpigrslk	lpslthagap	vsrlgppvs
541	ldrrssssss	mssaytvsrr	sslaspppg	tppengassl	pgltpaqhym	lryasarg
601	sgtpptaahs	ldrmgglsvp	pwrsteypg	ynpnagvtrr	asdparaadh	paparvqrk
661	slgcvhtpps	vatgrnfdph	hptsvyspqp	psitenvamd	trglqeepev	gtsvmngnl
721	pymdfsstdt	lgyggpegta	aepyeargpg	slplgpppt	nygpghcaqq	vsypdptpen
781	wgefshagv	ypsnkpgaa	ysqcprlehy	<b>gqvqvkpeaqg</b>	cpvgsdstgl	apclnahpse
841	gspgpqplfs	hhpqlppqy	pqsgpyppqp	hgylsteprl	glnfnpsssh	stgqlkaqlv
901	cnyvqsqqel	lwegrnrggl	pnqelpyqsp	kflggsqvsq	spaktpaaaa	aaygsfgapa
961	sanhksgsyp	apschetft	vgvnrpshrp	aapprllppl	spcygplkvg	dnpscghe
1021	vgrlgagpal	ypppegqvcn	aldsliddnt	qldfvailde	aqglspplsh	eqgdsskntp
1081	spsgppnmav	gnmsvlgsi	pgetqflnss	a		

**Specific Reference(s):**

Wetmore, C., Eberhardt, D. and Curran, T. (2000) The normal *patched* allele is expressed in medulloblastomas from mice with heterozygous germline mutation of *patched*. *Cancer Res.* **60**(8): 2239-2246.

Qualtrough D *et al.* (2004) Hedgehog signalling in colorectal tumour cells: induction of apoptosis with cyclopamine treatment. *Int J Cancer* **110**:831-7.

Niemann C *et al.* (2003) Indian hedgehog and beta-catenin signaling: role in the sebaceous lineage of normal and neoplastic mammalian epidermis. *Proc Natl Acad Sci U S A* **100** Suppl 1:11873-80.

**Background Reference(s):**

[Hall](#), J.M., Hooper, J.E., Finger, T.E. (1999) Expression of sonic hedgehog, patched, and gli1 in developing taste papillae of the mouse. *J. Comp. Neurol.* **406**(2):143-155.

[Park](#), H. L. *et al.* (2000) Mouse *Gli1* mutants are viable but have defects in SHH signaling in combination with a *Gli2* mutation. *Development* **127**(8): 1593-1605.

Kinzler, K.W. *et al.* (1987) Identification of an amplified, highly expressed gene in a human glioma. *Science* **236**:70-73.

Kinzler, K.W. *et al.* (1988) The GLI gene is a member of the Kruppel family of zinc finger proteins. *Nature* **332**:371-4.

Ghali, L. *et al.* (1999) Gli1 protein is expressed in basal cell carcinomas, outer root sheath keratinocytes and a subpopulation of mesenchymal cells in normal human skin. *J. Invest. Dermatol.* **113**:4, 595-9.

Dahmane, N. *et al.* (2000) Activation of the transcription factor Gli1 and the Sonic Hedgehog signaling pathway in skin tumors. *Nature* **389**:6653, 876-881.

**Related Products:**

- #100-401-223 Anti-Gli-1 (Rabbit)
- #600-401-845 Affinity Purified Anti-Human Gli-2 (Rabbit)
- #600-401-695 Affinity Purified Anti-Mouse Gli-2 (Rabbit)
- #600-401-694 Affinity Purified Anti-Human Gli-3 (Rabbit)
- #611-703-127 Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (DONKEY) MX10
- #611-132-122 IRDye800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10
- #MB-070 Blocking Buffer for Fluorescent Western Blotting
- #KIA-003 **MaxTag™** Anti-RABBIT IgG Kit for Immunoblotting

**USDA Certification:** All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation.

**Note:** This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information.