

Certificate of Analysis

Product: Affinity Purified Anti-Nestin (Rabbit)

Code: 600-401-417

Lot #: 19810

Size: 100 µg

Physical State: Liquid (sterile filtered)

Antibody Concentration: 0.60 mg/ml (by UV absorbance at 280 nm)

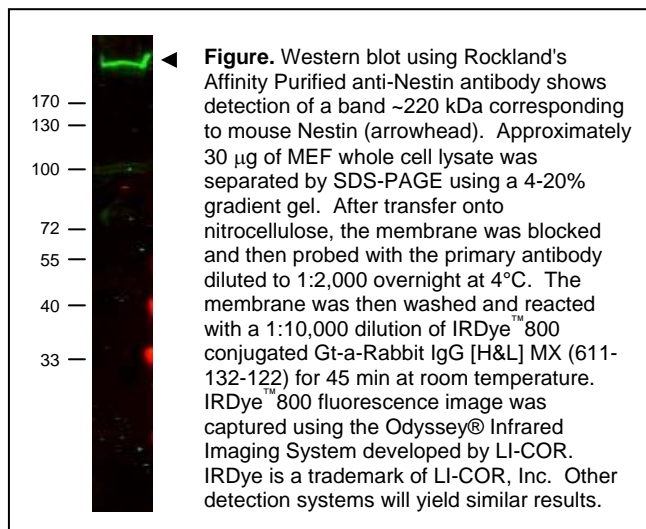
Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Stabilizer: None

Preservative: 0.01% (w/v) Sodium Azide

Storage Conditions: Store vial at -20° C prior to opening. Dilute only prior to immediate use. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Expiration date is one (1) year from date of opening.

Background: Nestin, is a large intermediate filament protein (class Type VI) that was first identified with a monoclonal antibody by Hockfield and McKay (1985). Nestin is expressed predominantly in stem cells of the central nervous system in the neural tube. Nestin is expressed during development and in myotendinous and neuromuscular junctions. Nestin expression is restricted, typically disappearing by E18. Nestin is thought to be a reasonable neuronal marker; however, recent studies have found nestin expression in other cell types such as endothelial cells. Nestin expression is seen in almost all GBMs (Glioblastoma multiformes) and many melanomas (both primary and metastatic) but not in any metastatic carcinomas. Upon terminal neural differentiation, nestin is downregulated and replaced by neurofilaments.



Application Note(s): This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 200-220 kDa in size corresponding to Nestin protein by western blotting in the appropriate cell lysate or extract.

Recommended Dilutions:	ELISA	1:20,000 - 1:80,000
	WESTERN BLOT	1:500 - 1:3,000
	IF MICROSCOPY	User Optimized
	OTHER APPLICATIONS	User Optimized

Purity and Specificity: This affinity purified antibody is directed against human Nestin protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross reactivity with Nestin protein from human and macaque (100% homology). Based on protein sequence homology also expect partial reactivity against Nestin homologues from rabbit (94%), mouse (reactivity shown above), rat and hamster (88%), and bovine and dog (82%). Reactivity against homologues from other sources is not known.

Relevant Link(s): Swiss Prot: [P48681](http://www.uniprot.org/SwissProt/P48681) NCBI Link [NP_006608](http://www.ncbi.nlm.nih.gov/nuccore/NP_006608)

Immunogen: This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a recombinant protein corresponding to amino acids 1484-1500 of human Nestin protein.

Protein Sequence: Human Nestin, 1621 aa, predicted MW 177.4 kDa

1	megcmgeesf	qmwelnrrle	aylarvkale	eqnellsael	gglraqsadt	swrahaddel
61	aalralvdqr	wrekhaaeva	rdnlaeleg	vagrcqqlr	arertteeva	rnraveaek
121	carawlssqv	aelereleal	rvaheevvg	lnaqaacapr	cpapprgppa	papeveelar
181	rgeawrgav	rgyqervahm	etslgqarer	lgravqgare	grlelqqqla	erggllerra
241	aleqrlegrw	qerlratekf	qlavealeqe	kqglqsqiaq	vlegrqqlah	lkmslsleva
301	tyrtlleaen	srllqtpgggs	ktslsfqdpk	lelqfprtpe	grrlgsllpv	lsptslopsl
361	patletpvpa	flknqeflqa	rtptlastpi	pptpqapspa	vdaeiraqda	plslqtqgg
421	rkqapeplra	earvaipasv	lpgpeepggq	rqeastgqsp	edhaslappi	spdhssleak
481	dgesggsrvf	sicrgegeqg	iwglveketa	iegkvvsslg	qeiweeedln	rkeiqdsqvp
541	leketlkslg	eeiqeslkti	enqshetler	enqecprsle	edletlksle	kenkellkdv
601	evvrplekea	vgqlkptgke	dtqtlqslqk	enqelmksle	gnlefflpg	tenqelvssl
661	qenlesltal	ekenqeplrs	pevgdeearl	pltkenqepl	rsledenkea	frslekenqe
721	plktleedq	sivrpleten	hkslrsleeq	dqetlrltek	etqrrrslg	eqdqmtlrrp
781	ekvdleplks	ldqeiarpie	nenqeflksl	keesveavks	leteilesk	saggenletl
841	kspetqaplw	tpeeinggam	nplekeiqep	lesvevnqet	frleeeenqe	slslgawnl
901	enlrspvevd	kesqrmleee	enlgkgeyqe	slrsleeeqg	elpqsadvqr	wedtekdqe
961	laqesppgma	gvenedeael	nlreqdftg	keevveqgel	nateevwipg	eghpespepk
1021	eqrglvegas	vkgaagelqd	pegqsqqvga	pglqapqglp	eaieplvedd	vapggdqasp
1081	evmlgsepam	gesaagaepg	pgqgvglgd	pghlreevm	eppleeesle	akrvqglgd
1141	rkdleaggl	gtefselfgk	srpweppre	greeseaeap	rgaeefpae	tlghtgsdap
1201	spwplgseea	eedvppvls	psptypile	dapgpqpqae	gsqeaswgqv	graealgkve
1261	seqeelgsge	ipegpqeege	esreeseede	lgetlpdstp	lgyfyrspst	prwdptgeqr
1321	pppqqetgke	gwdpavlase	gleappseke	egeegeeecg	rdsdlseefe	dlgteapflp
1381	gvpgevaepl	gvvpqllldp	aawdrdgesd	gfadeeesge	egeedqeegr	epgagrwwpg
1441	ssvgsqals	ssqrgefles	dsvsvspwd	dslrgavaga	pktaletesq	dsaepsgsee
1501	esdpvslere	dkvpgpleip	sgmedagppa	diigvngqgp	nlegksqhvn	ggvmngleqs
1561	eevgqgmplv	segdrgpsfq	eeegsalkts	wagapvhlqg	gqflkftqre	gdreswssge
1621	d					

General References:

Dahlstrand, J., Zimmerman, L.B., McKay, R.D. and Lendahl, U. (1992) Characterization of the human nestin gene reveals a close evolutionary relationship to neurofilaments. *J. Cell. Sci.* **103** (Pt 2), 589-597.

Yaworsky, P.J. and Kappen, C. (1999) Heterogeneity of neural progenitor cells revealed by enhancers in the nestin gene. *Dev. Biol.* **205** (2), 309-321.

Hockfield, S. and McKay, R.D. (1985) Identification of major cell classes in the developing mammalian nervous system. *J. Neurosci.* **5** (12), 3310-3328.

Mokry, J., Cizkova, D., Filip, S., Ehrmann, J., Osterreicher, J., Kolar, Z. and English, D. (2004) Nestin expression by newly formed human blood vessels. *Acta Neurochir. Suppl.* **13** (6), 658-664.

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[#MB-070](#) Blocking Buffer for Fluorescent Western Blotting

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