

Datasheet: 6625-1010

**BATCH NUMBER 169516**

<b>Description:</b>	MOUSE ANTI RAT NESTIN
<b>Specificity:</b>	NESTIN
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	Rat-401 (4D4)
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.1 mg

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Immunohistology - Frozen	▪			1/40 - 1/400
Immunohistology - Paraffin	▪			1/40 - 1/400
Western Blotting	▪			
Immunofluorescence	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

### Target Species

Rat

### Species Cross Reactivity

Reacts with: Mouse  
Does not react with: Human

**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

### Product Form

Purified IgG - liquid

### Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

<b>Buffer Solution</b>	TRIS buffered glycine.
<b>Preservative Stabilisers</b>	0.05% Sodium Azide (NaN <sub>3</sub> )
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Nestin purified from embryonic rat spinal cord.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P21263</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">25491</a>    Nes    <a href="#">Related reagents</a></p>
<b>RRID</b>	AB_2151135
<b>Fusion Partners</b>	Spleen cells from immunized Balb/c mice were fused with cells of the NS1 myeloma cell line.
<b>Specificity</b>	<b>Mouse anti Rat Nestin antibody, clone Rat-401</b> recognizes rat nestin, a large intermediate filament protein transiently expressed in embryonic glial cells ( <a href="#">Hockfield and McKay 1985</a> ). It is predominately expressed in stem cells of the developing nervous system. Terminal differentiation is associated with a loss of nestin expression. Nestin expression has also been noted in other embryonic tissues, also in most Glioblastoma multiformes and many melanomas.
<b>Immunohistology</b>	We recommend perfusing tissues with 4% paraformaldehyde at pH 7.4 for light microscopy or with either 4% paraformaldehyde at pH 10.0 or 4% paraformaldehyde with 0.1% glutaraldehyde at pH 7.4 for EM. For Immunocytochemistry we recommend using cells fixed in 4% paraformaldehyde buffered with 50 mM sodium borate at pH 9.5.
<b>Western Blotting</b>	Mouse anti Rat Nestin antibody, clone Rat-401 reacts with a band at 200-220 kDa in reducing gels of newborn rat or mouse cell extracts. For western blotting it is recommended that samples should be boiled in 4 volumes of 125 mM Tris, pH 6.8, 10% 2-mercaptoethanol, 10% glycerol and 4.6% SDS. Membranes should be blocked with milk or BSA. 5% PAGE gels are suggested.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Aleksandrova, M.A. <i>et al.</i> (2001) Transplantation of Cultured Human Neural Progenitor Cells into Rat Brain: Migration and Differentiation <a href="#">Bull Exp Biol Med. 132: 1000-3.</a></li> <li>2. Poltavtseva, R.A. <i>et al.</i> (2001) <i>In vitro</i> development of neural progenitor cells from human embryos. <a href="#">Bull Exp Biol Med. 132: 861-3.</a></li> <li>3. Bertelli, E. <i>et al.</i> (2002) Nestin expression in rat adrenal gland. <a href="#">Histochem Cell Biol. 117: 371-7.</a></li> <li>4. Zhang, H. <i>et al.</i> (2003) VEGF is a chemoattractant for FGF-2-stimulated neural progenitors. <a href="#">J Cell Biol. 163: 1375-84.</a></li> <li>5. Mori, T. <i>et al.</i> (2005) Combination of hTERT and bmi-1, E6, or E7 induces prolongation</li> </ol>

of the life span of bone marrow stromal cells from an elderly donor without affecting their neurogenic potential. [Mol Cell Biol. 25: 5183-95.](#)

6. Choi, J.S. *et al.* (2007) Upregulation of vascular endothelial growth factor receptors Flt-1 and Flk-1 following acute spinal cord contusion in rats. [J Histochem Cytochem. 55: 821-30.](#)

7. Choi, J.S. *et al.* (2009) Enhanced expression of SOCS-2 in the rat hippocampus after transient forebrain ischemia. [J Neurotrauma. 26: 2097-106.](#)

8. Choi, J.S. *et al.* (2009) Transient expression of Bis protein in midline radial glia in developing rat brainstem and spinal cord. [Cell Tissue Res. 337: 27-36.](#)

9. Barreira, A.L. *et al.* (2009) Bone marrow mononuclear cells attenuate interstitial fibrosis and stimulate the repair of tubular epithelial cells after unilateral ureteral obstruction. [Cell Physiol Biochem. 24: 585-94.](#)

10. Choi, J.S. *et al.* (2010) Expression of vascular endothelial growth factor receptor-3 mRNA in the rat developing forebrain and retina. [J Comp Neurol. 518: 1064-81.](#)

11. Shin, Y.J. *et al.* (2010) Enhanced expression of vascular endothelial growth factor receptor-3 in the subventricular zone of stroke-lesioned rats. [Neurosci Lett. 469: 194-8.](#)

12. Arnold, T.D. *et al.* (2012) Defective Retinal Vascular Endothelial Cell Development As a Consequence of Impaired Integrin  $\alpha V\beta 8$ -Mediated Activation of Transforming Growth Factor- $\beta$ . [J Neurosci. 32: 1197-206.](#)

13. Shin, Y.J. *et al.* (2013) Induction of vascular endothelial growth factor receptor-3 expression in perivascular cells of the ischemic core following focal cerebral ischemia in rats. [Acta Histochem. 115 \(2\): 170-7.](#)

14. Araujo, R.M. *et al.* (2016) Mesenchymal stem cells promote augmented response of endogenous neural stem cells in spinal cord injury of rats [Semina: Ciências Agrárias. 37 \(3\): 1355.](#)

15. Shin, Y.J. *et al.* (2016) Increased expression of suppressor of cytokine signaling 2 in the subventricular zone after transient focal cerebral ischemia in adult rats. [Brain Res. 1648 \(Pt A\): 163-71.](#)

---

<b>Storage</b>	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.
----------------	---

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

---

<b>Guarantee</b>	12 months from date of despatch
------------------	---------------------------------

---

<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10072 available at: <a href="https://www.bio-rad-antibodies.com/SDS/6625-1010">https://www.bio-rad-antibodies.com/SDS/6625-1010</a>
--------------------------------------	--

---

<b>Regulatory</b>	For research purposes only
-------------------	----------------------------

---

## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...) [HRP](#)

Rabbit Anti Mouse IgG (STAR12...) [RPE](#)  
Goat Anti Mouse IgG (STAR70...) [FITC](#)  
Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)  
Goat Anti Mouse IgG (STAR76...) [RPE](#)  
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),  
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),  
[FITC](#), [HRP](#)  
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)  
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)  
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)

### **Recommended Negative Controls**

[MOUSE IgG1 NEGATIVE CONTROL \(MCA1209\)](#)

**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://www.bio-rad-antibodies.com/technical-support)

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](http://bio-rad-antibodies.com/datasheets)

'M381560:210512'

**Printed on 29 Jan 2026**

---

© 2026 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)