

## Datasheet: 6625-1010

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|----------------------|-----------------------|
| <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.

|                                 |   |
|---------------------------------|---|
| <b>Target Species</b>           | Rat   |
| <b>Species Cross Reactivity</b> | <p>Reacts with: Mouse</p> <p>Does not react with: Human</p> <p><b>N.B.</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.</p> |
| <b>Product Form</b>             | Purified IgG - liquid   |
| <b>Preparation</b>              | 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><br/> <a href="#">P21263</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b><br/> <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 of the life span of bone marrow stromal cells from an elderly donor without affecting their neurogenic potential. <a href="#">Mol Cell Biol. 25: 5183-95.</a></li> </ol> |

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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.](#)

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| <b>Storage</b>                       | <p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p> |
| <b>Guarantee</b>                     | 12 months from date of despatch   |
| <b>Health And Safety Information</b> | <p>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></p> <p>10072</p>  |
| <b>Regulatory</b>                    | For research purposes only  |

## Related Products

### Recommended Secondary Antibodies

|                                   |                     |
|-----------------------------------|---------------------|
| Goat Anti Mouse IgG (STAR77...)   | <a href="#">HRP</a> |
| Rabbit Anti Mouse IgG (STAR12...) | <a href="#">RPE</a> |

|   |   |
|---|---|
| Goat Anti Mouse IgG (STAR70...)         | <a href="#">FITC</a>  |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | <a href="#">Alk. Phos.</a> , <a href="#">HRP</a>  |
| Goat Anti Mouse IgG (STAR76...)         | <a href="#">RPE</a>   |
| Goat Anti Mouse IgG (H/L) (STAR117...)  | <a href="#">Alk. Phos.</a> , <a href="#">DyLight®488</a> , <a href="#">DyLight®550</a> ,<br><a href="#">DyLight®650</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> ,<br><a href="#">FITC</a> , <a href="#">HRP</a> |
| Goat Anti Mouse IgG (Fc) (STAR120...)   | <a href="#">FITC</a> , <a href="#">HRP</a>  |
| Rabbit Anti Mouse IgG (STAR13...)       | <a href="#">HRP</a>   |
| Rabbit Anti Mouse IgG (STAR9...)        | <a href="#">FITC</a>  |

**Recommended Negative Controls**

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

|                                  |   |                  |   |               |   |
|----------------------------------|---|------------------|---|---------------|---|
| <b>North &amp; South America</b> | Tel: +1 800 265 7376<br>Fax: +1 919 878 3751<br>Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a> | <b>Worldwide</b> | Tel: +44 (0)1865 852 700<br>Fax: +44 (0)1865 852 739<br>Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a> | <b>Europe</b> | Tel: +49 (0) 89 8090 95 21<br>Fax: +49 (0) 89 8090 95 50<br>Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a> |
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'M381560:210512'

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