

## Datasheet: 8479-0004

<b>Description:</b>	MOUSE ANTI SYNAPTOPHYSIN
<b>Specificity:</b>	SYNAPTOPHYSIN
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	SY38
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	25 µg

## 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	▪			
Immunohistology - Paraffin	▪			
Western Blotting	▪			

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>	Human
<b>Species Cross Reactivity</b>	<p>Reacts with: Rat, Mouse, Bovine, Western grey kangaroo</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 ascites
<b>Buffer Solution</b>	Phosphate buffered saline.
<b>Preservative Stabilisers</b>	<p>&lt;0.1% Sodium Azide (NaN<sub>3</sub>)</p> <p>0.5% Bovine Serum Albumin</p>

<b>Approx. Protein Concentrations</b>	0.05 mg/ml
<b>Immunogen</b>	Synaptophysin presynaptic vesicles.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P08247</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">6855</a>    SYP    <a href="#">Related reagents</a></p>
<b>RRID</b>	AB_2286948
<b>Specificity</b>	<p><b>Mouse anti Human synaptophysin antibody, clone SY38</b> recognizes synaptophysin, also known as Major synaptic vesicle protein p38. Synaptophysin is a 313 amino acid ~38kDa multi pass transmembrane glycoprotein containing a single <a href="#">MARVEL</a> domain. Synaptophysin is characteristic of small neurosecretory vesicles and is also present in neuroendocrine cells of neuronal and epithelial phenotype (<a href="#">UniProt: P08247</a>). Synaptophysin is widely used as a marker for nerve terminals and for differentiating neuroendocrine tumours.</p> <p>Mouse anti Human synaptophysin antibody, clone SY38 has been used to detect synaptophysin in a number of neuronal and adrenal tumours including, pheochromocytomas, ganglioneuromas (<a href="#">Pace et al. 2002</a>), neuroendocrine tumours of epithelial origin; pancreatic islet cell carcinoma, bronchial and gastrointestinal carcinoids and medullary carcinoma of the thyroid (<a href="#">Wiedenmann et al. 1986</a>).</p>
<b>References</b>	<ol style="list-style-type: none"> <li>1. Leube, R.E. (1995) The topogenic fate of the polytopic transmembrane proteins, synaptophysin and connexin, is determined by their membrane-spanning domains. <a href="#">J Cell Sci. 108: 883-94.</a></li> <li>2. Kahle, P.J. et al. (2000) Subcellular localization of wild-type and Parkinson's disease-associated mutant alpha -synuclein in human and transgenic mouse brain. <a href="#">J Neurosci. 20: 6365-73.</a></li> <li>3. Thiele, C. et al. (2000) Cholesterol binds to synaptophysin and is required for biogenesis of synaptic vesicles. <a href="#">Nat Cell Biol. 2: 42-9.</a></li> <li>4. Spiwox-Becker, I. et al. (2001) Synaptic vesicle alterations in rod photoreceptors of synaptophysin-deficient mice. <a href="#">Neuroscience. 107: 127-42.</a></li> <li>5. González-Jamett, A.M. et al. (2010) The association of dynamin with synaptophysin regulates quantal size and duration of exocytotic events in chromaffin cells. <a href="#">J Neurosci. 30: 10683-91.</a></li> <li>6. Grossi, A.B. et al. (2013) Histologic and immunohistochemical classification of 41 bovine adrenal gland neoplasms. <a href="#">Vet Pathol. 50 (3): 534-42.</a></li> <li>7. Skripuletz, T. et al. (2013) Astrocytes regulate myelin clearance through recruitment of microglia during cuprizone-induced demyelination. <a href="#">Brain. 136 (Pt 1): 147-67.</a></li> <li>8. Etherington, S.J. et al. (2016) Heterochronic neuromuscular junction development in an Australian marsupial (<i>Macropus fuliginosus</i>) <a href="#">Journal of Zoology. 300 (1): 27-35.</a></li> <li>9. Gudi, V. et al. (2017) Synaptophysin Is a Reliable Marker for Axonal Damage. <a href="#">J</a></li> </ol>

[Neuropathol Exp Neurol. 76 \(2\): 109-25.](#)

10. Hassan, R. *et al.* (2019) The prospective role of mesenchymal stem cells exosomes on circumvallate taste buds in induced Alzheimer's disease of ovariectomized albino rats: (Light and transmission electron microscopic study). [Arch Oral Biol. 110: 104596.](#)

11. Gingele, S. *et al.* (2020) Delayed Demyelination and Impaired Remyelination in Aged Mice in the Cuprizone Model. [Cells. 9 \(4\): 945](#)

12. Hassan, R. *et al.* (2020) The prospective role of mesenchymal stem cells exosomes on circumvallate taste buds in induced Alzheimer's disease of ovariectomized albino rats: (Light and transmission electron microscopic study). [Arch Oral Biol. 110: 104596.](#)

13. Paasila, P.J. *et al.* (2021) Ground state depletion microscopy as a tool for studying microglia-synapse interactions. [J Neurosci Res. 99 \(6\): 1515-32.](#)

14. Sen, S., Mishra, S. & Kaul, J. M. (2014) Study of Maturation of Synapses in the Human Tongue Epithelium Using Synaptophysin as Marker: An Immunohistochemical Approach. [Journal of Pioneering Medical Sciences, 4\(3\), 105-111.](#)

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**Further Reading**

1. Wiedenmann, B. *et al.* (1991) Synaptophysin. A widespread constituent of small neuroendocrine vesicles and a new tool in tumor diagnosis. [Acta Oncol. 30: 435-40.](#)
2. Cavalla, P. and Schiffer, D. (2001) Neuroendocrine tumors in the brain. [Ann Oncol. 12 Suppl 2:S131-4.](#)
3. Kasprzak, A. *et al.* (2007) Selected markers (chromogranin A, neuron-specific enolase, synaptophysin, protein gene product 9.5) in diagnosis and prognosis of neuroendocrine pulmonary tumours. [Pol J Pathol. 58: 23-33.](#)

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**Storage**

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.

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**Guarantee**

12 months from date of despatch

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**Health And Safety Information**

Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/8479-0004>  
10041

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

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

	<a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (STAR77...)	<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>

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 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 Fax: +44 (0)1865 852 739 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 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)  
'M405770:220916'

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